

UNIVERSITY OF ILLINOIS LIBRARY
GRADUATE DIVISION
NAVY PIER
CHICAGO 11, ILLINOIS

ILLINOIS AGRICULTURIST



Fifty-First Year

FEBRUARY, 1947

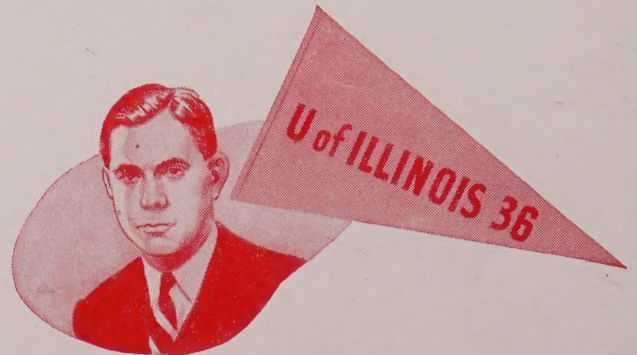
Member A.C.M.C.



Campus to GENERAL ELECTRIC

FLIGHT TEST ENGINEER

The Story of **CURT TALBOT**



AFTER he came on "Test" with General Electric in 1936, Curt Talbot kept right on studying electrical engineering, this time in the company's general and commercial courses.

Between hours of work and study he went out to the Schenectady airport to practice flying, piling up 500 flying hours and obtaining his commercial rating.

By taking lessons in both these fields—and taking them seriously, Curt was, unknowingly, giving himself the best possible preparation for his present job—that of Manager of the new General Electric Flight Test Laboratory.

During his first years with the company, Curt tested transformers, motors, industrial control apparatus. He did application engineering on paper-mill and printing-press equipment. He worked as a sales assistant.

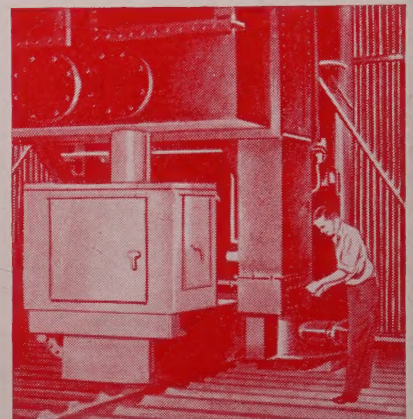
But when the war placed a heavy demand on G. E. both for aircraft equipment and for men who understood it, Curt's interest in flying was remembered. He was assigned to work on turbosuperchargers.

Today, ten years out of Illinois, Curt Talbot manages a laboratory large enough to house its own fleet of test planes. He supervises the testing of jet-propulsion and gas-turbine engines, radar applications, turbosuperchargers, aircraft instruments, automatic pilots and control systems. And he directs the use of the "flying laboratory"—a B-29 especially equipped for test flights.

Next to schools and the U.S. Government, General Electric employs more college engineering graduates than any other organization.



Curt helped pay his way through the U. of Illinois by repairing radios in his spare time. He majored in electrical engineering.



On Test with G.E., he was assigned to high-voltage transformers. He continued his engineering studies by taking G-E courses.



In his spare time Curt learned to fly. His knowledge of engineering plus flying gave him the opportunity, in 1940, of joining the Company's turbosupercharger program.



Today Curt is Manager of the G-E Flight Test Division. He directs the big new G-E Flight Laboratory, center of tests on jet-propulsion engines, gas turbines, etc.

GENERAL ELECTRIC

TELEPHONE 7-4251

WELCOME TO FARM AND HOME WEEK

We, the students of the College of Agriculture, your sons and daughters, bid you welcome to the campus. This is your week — a week in which we hope you will become aware of the part you have in our great University. Go into the buildings, renew your acquaintance with the extension and resident staff, refresh your minds in the science of your profession, talk with your associates, and most of all, have a grand and glorious time.

To develop standards, to learn skills and why they are important, and to keep ever before us the desire to probe further into our own fields and others; these are our chief objectives in college.

Standards, the ability to recognize the best, and the desire and initiative to work toward such goals is the first objective.

The University of Illinois has come a long way from the time it was known as that "cow college" half way between Champaign and Urbana, and mistaken connotations of "going to school to learn how to cook and sew or plow corn" have almost disappeared, as college graduates have gone out into the field to prove that they not only know skills but they also know why they are important.

Colleges can be responsible for interesting a student so vitally in his field and the world about him, that through the medium of the latest publications, radio and associates in his particular field and others he will keep himself alert and informed as is so desirable in our fast moving world.

Our University of Illinois is our land of opportunity. By the fruits of our labors while we are here and when we graduate, we hope to express our gratitude to the state and the others who have made it possible.

SELECTED TO CARRY THE DUROC BANNER FOR US IN 1947

FENMAR ROYAL TYPE

The \$2,000 ROYAL TRIUMPH pig from the most universally admired litter of the season. An individual of particularly outstanding merit, with Illinois Champions represented on both sides of his pedigree, his dam being 1st senior gilt last year and 1st senior yearling this fall, he was destined to become a winner. He placed 4th and 3rd in the Illinois and Indiana Shows, respectively, and was in the 1st and 2nd Breeder-Feeder Litters at the same fairs. We are confident of his future in our herd.

FENMAR FLASH

From the record-smashing Maahs litter, a litter-mate to the Nebraska Junior Champion, sired by SPOT LIGHT'S IMAGE. Befitting his name this pig has plenty of advantage in his conformation and is the kind that you will want mated to a gilt selected in our winter offering.

Their Litters in Dam Will be Featured in Our

BRED SOW SALE--FEB. 11

Fenmar Farms

Fenton G. Hardin

Zadoc (Zed) Hardin

ORION, ILLINOIS

SUNNYSIDE FARMS

MORRIS, ILLINOIS

Aberdeen Angus Cattle

250 HEAD

"Start Right and You Will Not Need to Start Again"

Farm Located 4 Miles North of Morris, Illinois

ON ROUTE 47

WHITMAN & HARPER

Here's Why You Should Buy the New **Firestone** **CHAMPION** GROUND GRIP

**1. IT CLEANS UP TO 100%
MORE EFFECTIVELY**

2. IT PULLS UP TO 62% MORE

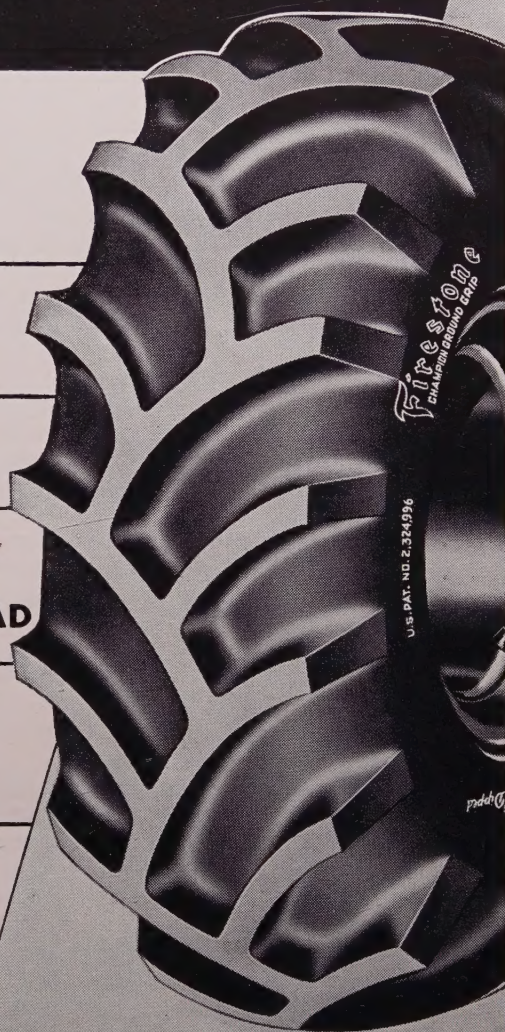
3. IT LASTS UP TO 91% LONGER

**4. IT GIVES A SMOOTHER RIDE AND
WEARS MORE EVENLY ON THE ROAD**

**5. IT IS THE ONLY TRACTOR TIRE
THAT TAKES A "CENTER BITE"**

**6. IT IS PATENTED—
IT CAN'T BE DUPLICATED**

**7. IT COSTS NO MORE THAN ANY
ORDINARY TRACTOR TIRE**



**SPECIFY FIRESTONE CHAMPION
GROUND GRIPS WHEN YOU
ORDER YOUR NEW TRACTOR**

OUT CLEANS OUT PULLS OUT LASTS

Any Other Tractor Tire

FARM and HOME WEEK

Farmers and homemakers from all Illinois will gather on the University of Illinois campus with staff and extension members of the University for the 46th annual Farm and Home week from Monday noon, January 27, to Thursday noon, January 30. Instead of the usual theorizing students, lecture halls and auditoriums will be filled with inquiring housewives posing practical home-keeping problems and with farmers fresh from the cowbarns and feedlots.

Since 1901 this University sponsored annual feature has attracted farm people from all over Illinois, except for short lapses during the two world wars. This year it promises to be one of the biggest yet, with a program filled with variety and practical interest.

Interesting Courses Offered

Registration will begin Monday morning, January 27, in the auditorium. After registering, farm folks will have choices of attending classes and exchange of information meetings covering everything from beekeeping through veterinary medicine. Dairy husbandry, agronomy—as regards both soils and crops—animal husbandry, several phases of agricultural engineering and agricultural economics, and—no, we didn't forget home-making—all these subjects and ramifications of them will be included in various classes presented through the four-day period.

By Don Duvick '48

These classes are only one section of the program, however. Each day at 3 p. m., except on Thursday, a general session of all participants will be held. On Thursday this meeting will be held at 11 a. m. These meetings will be the key event of each day, with prominent personalities as guest speakers at each meeting. Such men as Alfred P. Haake, well known economist from Park Ridge, President Stoddard of the University of Illinois, and John Strohm, world traveler and author will make the general sessions a high point of interest for all who attend Farm and Home week.

All work and no play would never do, of course, so to take these busy folks' off their classes there will be daily social and recreational periods at 4:30 p. m. in the lower gym of Bevier hall. In the evenings special recreational programs will be held. Monday night there will be an open house at Illini Union. All participants in Farm and Home week are invited to come and get acquainted with each other. Tuesday night features a winter festival at Huff gymnasium, with folk games and dances, mixers, and song sessions. A music and drama festival made up of one act plays and various vocal and instrumental combinations will be presented on Wednes-

day night. The talent for this program will be drawn from counties throughout the state.

University Presents Varied Exhibits

The University will have several exhibits open throughout the week. A corn and soybean show in Davenport hall and a machinery and equipment exhibit in the agricultural engineering buildings will be presented. Livestock and poultry under experimental conditions will be open for public view on the animal husbandry farm. Herds of all popular breeds of dairy cattle will be on exhibit at dairy husbandry farms; flowers and vegetables and research equipment will be at the horticulture field laboratory and floriculture and vegetable greenhouses. These are only a few of the exhibits that will be open.

As if this were not enough to keep everyone as busy as a cow with two calves, several special events have been scheduled on the campus or in the Twin Cities for the same time as Farm and Home week. Although not directly connected with Farm and Home week these events are concerned with farmers' and homemakers' activities. The annual Illinois Crop Improvement association banquet, the Illinois Farmers' Institute annual meeting, and the Stockmen's banquet are a few of the meetings scheduled for this time.

Illinois Sheep Win Top Placings at International

Three blue ribbons, two reserve championships, and on three sheep! That was the unique record of the Suffolk sheep entered by the University of Illinois, college of agriculture at the recent Victory International Livestock exposition. J. W. Hampton, livestock foreman in charge of sheep, states that he believes this is one of the best show records ever achieved by an exhibitor at the International.

The 135-pound Suffolk wether lamb which won first in its class and champion of the breed was lambled in February from one of the ewes in the University flock which was started just two years ago. Instead of selling the champion at auction, it was brought back to the farm and will be used in class work.

In the Southdown wether class, Illinois received ninth place in a class of 72 entries. Two Southdown wethers entered in the carcass class for all breeds of sheep won fourth and fifth places.

The wether entries made by the University were small, because the aim is to specialize in production of high quality

By Harold Guither '50

breeding stock. The best ram lambs must be saved for breeding stock and cannot be sacrificed for market purposes.

Strong Competition in Breeding Classes

In the Suffolk breeding classes, Illinois won first and reserve champion on both ewe lamb and ram lamb. The championships in both classes went to Yellow Briar farms, Mono Mills, Ontario. This show record in Suffolks predicts a greater expansion of the Suffolk flock and more winnings in the future.

The Shropshire classes were filled to overflowing with the top animals of the breed. In heavy competition Illinois won fourth on yearling ram in a class of 25, fifth on ewe lamb in a strong class of 35 and third on get-of-sire, just behind the entries of W. F. Renk and A. J. Moore, two of the leading Shropshire breeders in America. Placing below the Illinois entry were the famous flocks of Iroquois farm, Cooperstown, N. Y., Curtiss Candy company from Dundee,

Illinois, and A. J. Broughton, Albany, Wis.

In Rambouillet breeding classes, Illinois won third aged ram, fourth ram lamb, fifth ewe lamb, third pen of three ewe lambs, and third get-of-sire.

Five Breeding Flocks Maintained

The animal husbandry department maintains five purebred flocks for educational and research purposes: a Southdown flock of 20 breeding ewes, a flock of 20 purebred Hampshire ewes; a Shropshire flock of 30 ewes; a Rambouillet flock of 15 ewes; and a Suffolk flock of nine ewes. It is the University policy to maintain its own breeding stock, purchasing only rams from other flocks.

New Experiments

Under the direction of W. G. Kamalade, professor of sheep husbandry, experiments on sheep feeding and management are carried on. A test was recently completed on the effects of feeding thiouracil to western feeding lambs. Thiouracil is a white synthetic com-

(Continued on Page 34)

Poultry Judging Team Wins Intercollegiate

Highest honors in the production judging division of the National Intercollegiate Poultry contest, held December 14 at Purdue university, were carried away by the University of Illinois.

Members of the Illinois team are: Keith D. Heaton, Vermont; Herbert Kobler, Marion; and Robert Metzger, Hammond. High individual for the team was Robert Metzger. Acting as alternate was Irwin A. Smith. Coached by L. E. Card, professor of poultry husbandry and head of the department, the team competed against five other top university teams. Universities represented in the judging were the University of Missouri, University of Louisiana, Iowa State college, Kansas State, Purdue university and the University of Illinois.

The contest consisted of three divisions: market products, exhibition judging and production judging. An annual event prior to the war, this was the first postwar contest.

The judging contest was held during the day and in the evening a banquet for the contestants was given, at which time the winners were announced.



Left to right: Herbert Kobler, Robert Metzger, and Keith Heaton, members of the winning Illinois Poultry Judging team

Rarest Coverlet Collection Given Home Ec Department

By Julia Ruth Stahl

One of the rarest and finest collections of early American coverlets in existence has been presented to the home economics department, University of Illinois. The very generous donor of this gift is B. F. Hunter of Lebanon, Indiana, who offered these two gift collections in memory of the late Mrs. Hunter, a graduate of the University of Illinois Class of 1919. Offers by museums such as the Metropolitan Museum of New York were refused by Mr. Hunter so that a unique collection might serve as a memorial to Mrs. Hunter, the former Angeline Gillespie, a loyal and interested alumnae of Illinois. The gifts were accepted by Miss Lita Bane, head of the home economics department, University of Illinois.

The first gift includes 21 double woven coverlets, of which ten are of historical importance, 26 single woven coverlets of which one is historical, six miscellaneous coverlets, and 12 other miscellaneous articles. A total of 65 items constitutes this portion of the collection.

Many Coverlets of Historical Value

One of the most historical coverlets of this first collection is dated July 4, 1824. This double woven coverlet, called the "General Lafayette" coverlet has border motifs of spread eagles (the Ma-

sonic emblem) and columns guarded by soldiers. An inscription in the corner reads, "Agriculture and manufacturers are the foundation of our independence." "General Lafayette" is inscribed in the border. The coverlet was woven by E. Denniston.

Another historical blue and white double woven coverlet is called "E Pluribus Unum." The motifs include spread eagle emblems with banners above them bearing the inscription "E Pluribus Unum." The capitol dome appears at intervals in the border along with deer and large tree motifs. This coverlet was woven at the Ithaca Carpet factory by Arch Davidson.

A single woven coverlet dated 1836 is another rare item of the collection. Its design includes a "Four Roses" pattern in red, white, and blue, and was woven by Emanuel Ettenger of Aronsburg, Pennsylvania.

Included in the rare miscellaneous articles is a red and green early linen damask table cloth in excellent condition. Another article dated 1835 is a weavers' sample, single woven coverlet made by Joseph Schnee, Fleebury, Pennsylvania.

The second and most recent gift con-

sists of 76 coverlets and is the O. J. Bierly collection. Mr. Bierly, a widely known collector of early American art objects, gathered the 76 items over a period of 50 years. Hunter purchased the second group of items so that the memorial would be one of the finest and rarest of its kind. The gifts were given to the home economics department because of the tie-in with home life. The two collections, consisting of 130 articles, will be used for illustrative material in teaching.

Early American Handmade Spreads

Two items that are historically important and outstanding examples of the second gift are two candlewick spreads dating from 1750 to 1775. They represent the earliest decorative bedspreads handmade by American housewives. These two spreads are exceedingly rare and are forerunners of the machine made candlewick spreads of today.

Another rare double woven coverlet dated 1836 was made in Orleans county, New York. The border shows the spread eagle, doves of peace, olive branch and Christmas trees topped with a sunblast decoration.

Some unusual items of the collection include two "railroad" coverlets. One is a double woven coverlet in blue and

(Continued on Page 34)

Bankhead-Flanagan Act Boosts 4-H Club Work

By Kent Ryan '47

With the second year of the Bankhead-Flanagan act of 1945 well under way, Illinois is looking forward to a record enrollment in 4-H club membership in 1947. A goal of 50,000 members has been set by the state leaders and a vigorous campaign is under way this winter to start the trek to this mark.

As of December 1, 1945, 29 youth assistants, 12 assistant farm advisers, and 8 assistant home advisers are employed with the funds from this au-



E. I. PILCHARD
Associate Professor of Agriculture
4-H Club Work

thorization act to carry on the 4-H club work in 46 counties. Appropriations have been made available to 39 more of the 56 remaining counties for assistants but the positions have not yet been filled because of the lack of qualified personnel.

County Goals

Each county specialist will attempt to increase the enrollment in his or her county by 50 per cent or within 25 per cent of the potential membership, depending on which is the greater. With the aid of the 38,000 boys and girls enrolled in 1946 and the ever faithful local leaders, these county assistants will carry out the sign-up under the program outlined by the state leaders.

An increase of 1,100 members was recorded in favor of the 1946 records by the boys clubs throughout the state with only a few specialists employed at that time. There were also 40 more agricultural clubs functioning as compared to 1945.

According to E. I. Pilchard, in charge of boys' 4-H clubwork, much of the in-

creased enrollment will be derived from the enriched program that can be offered club members by these special workers. More time will be available for attending local club meetings, organizing new clubs, contacting potential members, and building a stronger county wide program. The county assistants will be able to do more for the members since their sole job is the work with rural youth in 4-H clubs and older out-of-school youth.

A great deal of credit must be given to those who were employed on these jobs last year for their work in returning club work to a prewar level. The results of their actions were outstanding at the county and state fairs as well as in other activities within their counties.

Appropriations

During the first fiscal year which ended June 30, 1946, Illinois received approximately \$120,000, most of which was used for the furtherance of 4-H club and rural youth work. This year's increment is expected to be about \$230,000, while the 1948 appropriation is estimated at \$350,000. This will be the maximum amount that can be received by Illinois under the present stipulation of the Bankhead-Flanagan act which is based on area in relation to farm population.

A portion of this allotment is being used for an agricultural engineering project on rural housing, an agronomy experiment, providing new counties with home advisers, and less than 10 per cent for expenses incurred here at the University in connection with the administration of this project.

County Allotments

Assistance is offered to counties on the basis of present and potential 4-H club membership plus the need for assistance. At the present time, \$2,000 per year is the maximum county appropriation offered per assistant. The balance of the salary and expenses is made up from county funds. While the majority of the counties are operating on this basis with one or two assistants, smaller or less densely populated counties have one assistant working between two or three counties.

Youth Assistants

The following people are employed as youth assistants in the state: L. L. Fuchs, Adams; D. R. Norman, Clinton-Marion; P. C. Pittman, Coles; D. W. Pike, Crawford-Lawrence; Elizabeth Pace, Kane-DuPage; H. V. Deffenbaugh, Edgar; G. I. Coffey, Effingham; G. R. Betzelberger, Ford; Mrs. Mary L. Clin-

ton, Franklin-Williamson; R. W. Trimble, Henry; Mildred Benz, Jackson.

Helen L. Garrison, Jefferson-Wayne; Mary E. Davies, Kankakee; M. O. Vesaas, Knox; H. W. Johnson, Lake; D. C. Locke, Macon; Betty M. Langford, Marshall-Putman-Woodford; Mrs. Loa B. Runion, Perry-Washington; W. F. Heberer, Randolph; Miriam J. Morgan, Rock Island.

L. R. Herbig, Stephenson; Barbara J. Doering, Tazewell; H. H. Bouslog, Vermilion; W. H. Gehring, Warren; Mrs. Bette L. Johnson, White; H. E. Deason, Whiteside; Blanche F. Feldott, Will; and G. E. Thompson, Winnebago.

Assistant Farm Advisers

Assistant farm advisers provided by this act are employed in the following counties: Champaign, G. R. Castle; DuPage, C. H. Castle; Kane, R. J. Howard; LaSalle, J. R. Davies; Lee, G. W. McGill, Jr.; Livingston, H. H. Fulkerson; Macoupin, Ferdinand Basting; Madison, A. F. Westerhold; Marshall-Putnam, P. L. Laffey; McLean, E. G. Mosbacker; Ogle, J. R. Kinsinger; and Woodford, K. A. Stocker.

Assistant Home Advisers

The eight assistant home advisers at work in the state are: Mrs. Virginia B.



MISS ANNA SEARL
Associate Professor of Home Economics
Extension, Assistant State Leader

Clarke, Champaign; Mrs. Claradehl W. Upham, Cook; Ruth E. Keene, Fulton; Helen E. Elliott, LaSalle; Mary E. Husted, Livingston; Lucille D. Pocklington, Macoupin; Margie J. VanderMay, McHenry; and Mrs. Roxana D. Bodine, McLean.



WITH
Sensational
**MEDIAL OCTO-PLANE
FREEZING**

Big
16 CUBIC FOOT
CAPACITY
FREEZES AND STORES
A YEAR'S SUPPLY
OF FOOD FOR THE
AVERAGE FAMILY

AVAILABLE NOW AT . . .

THE
Home Freezer
YOU'VE WAITED FOR

R. H. BISHOP COMPANY

103 North Second Street
CHAMPAIGN, ILLINOIS

Mercury's Leader to Head University Shorthorn Herd

With the purchase of Mercury's Leader, top bull of the recent Marellbar farm sale, the University has procured an outstanding young bull to head the Shorthorn herd on the South farm. Mercury's Leader was sired by Edelilyn's Royal Leader, one of the most popular bulls of the breed, and was sold in dam at Thomas E. Wilson's Edelilyn farm sale in 1945. His mother, Edelilyn Golden Drop 40, sold for \$5,000, the top female of the sale. The bull was calved on April 6, 1946, on the Marellbar farm of William Bartholomay, purchaser of the dam.

Mercury's Leader, a roan, nearly red bull calf, was purchased by the University at the Shorthorn sale held at Marellbar farms on November 30, for \$2,750. However, immediately following the auctioneer's announcement that the University was the successful bidder, Mr. Wilson stated that he, the breeder, and Mr. Bartholomay, the owner, had agreed to remit one-half of the purchase price in case the University decided to buy the bull to improve its Shorthorn herd. This was a very generous gesture and we students of the College of Agriculture are truly grateful to these gentlemen.

At the present time, the University maintains a herd of approximately 20 breeding cows of each of the three beef breeds. The Aberdeen-Angus herd is headed by Postelmere 5th, sire of Blue Boy, winner of the lightweight carcass class at the recent International and

reserve champion carcass of the show. He is also the sire of the first prize 2-year-old Aberdeen-Angus heifer at the recent International, which was sold as a calf to Mr. Robert Cresap, Seymour, Ill., who exhibited her most successfully at the major shows during the past season. Progress Tons, an 8-year-old bull of Hazlett breeding heads the Hereford herd at the present time.

In addition to the purebred cattle, 105 yearling steers are at present being fed in two experiments under the direction of R. R. Snapp, professor of beef cattle husbandry, and F. C. Francis, assistant professor of animal husbandry, both of whom recently returned to the animal husbandry staff after extensive service with the armed forces. One of these experiments includes Montana steers which are being fed a fattening ration of shelled corn, corn silage, soybean oil meal, and clover hay in the fourth of a series of tests to determine the feed requirements to finish cattle to good, choice, and prime slaughter grades.

These cattle will be slaughtered at appropriate stages of the feeding period by the meats division and processed to determine the relative percentages of fat, lean, and bone in the different grades.

The second drove of cattle on the farm are Texas yearlings which are being roughed over the winter on silage and hay. These cattle will be used in a pasture experiment to be conducted during the coming summer.

HOME EC-AG DEBATE

Laughter, jeers, and applause swelled the air in the Bevier hall gym on the night of December 17, as the members of the two clubs debated the issue "Resolved: that graduates in agriculture should marry home economics girls."

Strongly in favor of the resolution were Joan Clark, Willa Whitton, and Sonya Karlen, who based their argument on the common background between the two groups as sound basis for marriage. The girls also felt that the training received in the home economics curriculum would develop their group into wives who will be interesting companions as well as good housewives.

William Kammalade, professor of sheep husbandry, kept the boys from getting in the girls hair too much by capably performing his duty as moderator. His remarks were very timely to the subject and were greatly appreciated by the audience.

Doing their utmost to overcome the girls side were Hank Jones, Jim Robinson, and Wendell Hall. The boys pleaded for girls who had different backgrounds so that they would not become bored early in married life. They felt that home economic girls would know too much about their business and try to wear the pants of the family. Knowing that the girls would have to have the last word, the boys, dressed for track, took off while the girls were still talking.

After enjoying a short period of group singing led by Don Duvick, the group spent the remainder of the evening getting better acquainted, dancing and doughnut eating. The girls got in an extra lick on their behalf by outnumbering the boys in attendance and picking on likely prospects by tagging during the dances.

Judging from the enjoyable evening had by those present, here's to more joint meetings of the clubs.

Post-War FFA Convention

By John R. Albrecht

The Victory convention of the Future Farmers of America was held at the Municipal auditorium, Kansas City, Missouri, October 21 through October 24. Included among the 15,000 boys and 1,500 state and national advisers and guests were John N. Weiss, assistant professor of agricultural education, and 17 student delegates from the University of Illinois.

Monday, the opening day of the convention, a roll call of the states was held. Carrying out the Victory convention theme, a memorial service for all FFA members who died in service was held, and recognition of all members in service was made. In the afternoon, 170 American Farmer degrees were awarded to members who had carried on outstanding farming projects throughout the year. Illinois was represented by 10 members who received this degree.

The public speaking contest, held on Monday evening, was one of the highlights of the convention. The interest and knowledge of the participating members was aptly demonstrated as they spoke on designated agricultural subjects.

Tuesday, the national farm organizations of the United States brought their greetings to the conventioners and gave recognition to the work of the Future Farmers. At the evening session, the impressive Victory pageant was presented. Filling in a huge V, a representative of each state carried a placard telling of his state's outstanding contribution to the nation's farm war program. This colorful pageant aptly demonstrated the tremendous part the country's farms played in our victory.

Thursday evening, the Star Farmer award given to the outstanding young farmer of 1946 was presented to William G. Carlin, Coatesville, Pennsylvania, who with his brother, farmed 190 acres of run-down farmland, bringing it back into production. Also Thursday evening, the Future Homemakers of America bore greetings to the convention.

Convention entertainment was furnished by many notables, including Mickey Rooney, Charlie McCarthy, Mortimer Snerd, and Edgar Bergen. Mortimer Snerd received the distinction of being made an honorary member of the FFA. The poor fellow was so overcome by the honor that all he could say was "Youp, youp, youp."

When interviewed, several Illinois vocational agriculture students who attended the convention, expressed their appreciation of the well-planned and executed programs of the convention. They felt that the Future Farmers' platform is very outstanding and is helping the American farm boys to become good, progressive farmers of tomorrow.

Nutrition for Efficient Swine Production

The division of swine husbandry under the capable guidance of J. L. Krider, professor of swine husbandry, continues to contribute to the field of swine production. He, with the aid of his staff, namely: D. E. Becker, S. W. Terrill, R. F. Wilson, and H. D. Wallace, and the 40-acre experimental farm has made and confirmed many startling discoveries. Swine nutrition is now probably the most fascinating field of experimentation.

The research in the swine division has been directed into four main channels: 1. an attempt to explore new fundamentals in swine nutrition; 2. to investigate the nutritional needs during the critical periods, that is for growing pigs up to 75 pounds, and for sows during gestation and lactation in drylot; 3. to obtain answers on feeding problems which can be immediately applied by Illinois farmers; 4. to test the effect of selection for improving swine in economy of gain.

In exploring new fundamentals the importance of the water-soluble vitamins, especially those of the B2 complex, has been proven. In addition to the six known vitamins, pigs are now known to require additional factors. The identity of these additional factors is unknown, but they are found in green growing pastures, high quality alfalfa meal, dried solubles, and liver extract.

This fact is further brought out by experimentation with weanling pigs. Rations composed of common feeds which were adequate in protein, minerals, energy, and fat-soluble vitamins, gave very poor results when fed to young pigs in drylot. The addition of the six crystalline B-vitamins gave a response in growth, thrift, and vigor. This, however, did not make for nutritional completeness. Alfalfa meal, liver extract, and certain other feeds added to the basal diet were needed to correct the deficiencies. The second critical period is gestation and lactation. Experimentation has been completed in which gilts were fed a basal drylot ration which was adequate in all known essential nutrients. They weaned only 10 per cent of their pigs in two experiments. Similar gilts fed the same ration supplemented with alfalfa meal and distillers' solubles weaned 80 to 85 per cent of their pigs.

New Protein Supplies

Since the outbreak of the war, the swine division has tested several new protein supplies formulated to conform with available protein supplies. Alfalfa meal was found valuable enough that it can be increased to 10 per cent of the total ration, instead of the traditional 5 per cent. Soybean meal can replace animal protein supplementing corn and

By Charles W. Nicholson

minerals for pigs being fed under various circumstances. It has also been found that soybean meal made from bin-burned beans is as nutritious as meal made from sound soybeans. Tests have found brome grass a palatable pasture for swine. It remained green throughout the summer and early fall and withstood trampling remarkably well.

Effectiveness of Rapid, Slow Growth

Since 1939, experimentation has been in progress to study improving swine. A rapid gaining line and a slow gaining line have been developed. The evidence

duction is proper feeding and nutrition of the sow. The swine division has recently found this field of experimentation unusually enlightening.

Besides the need for protein, energy, minerals, water, and the fat-soluble vitamins, it has been found that brood sows also have a definite need for the water soluble vitamins especially those of the B-2 complex. These vitamins are supplied when sows have access to green, succulent forage. In drylot, however, certain rations have been found deficient when fed over a long period. Evidence has also been accumulated indicating the need for the "unknown"



The Kerrick Kleaner, an essential piece of equipment in maintaining necessary sanitation at the University swine farm

from this experiment indicated that differences in weight at market age are about one-sixth to one-fifth heritable. In other words, if the parents of a crop of pigs averaged 30 pounds heavier at six months of age than the population from which they were selected, the resulting improvement in their pigs would be about five to six pounds.

Proper Nutrition Necessary

Many swine producers have not been aware of the importance of meeting the nutritional needs of brood sows. The chief prerequisite to efficient pork pro-

B-vitamins contained in alfalfa meal. Liver extract has been found to be a good source of the unknown factors that are necessary to supplement certain rations for sows during gestation and lactation in drylot.

A folic acid concentrate, fed at the same level that it is contained in liver extract, revealed the possibility that folic acid is one of the essential factors. Gilts fed such a ration weaned 84 per cent of their pigs. Although not significantly heavier, they were more vigorous

(Continued on Page 32)

DOES SOIL AFFECT NUTRITION?

Research on the effect of soils on the nutritive value of food is being planned by Ernest De Turk, professor of soil fertility of the agronomy department. One of the projects will be a study of the effect of soil environment on the feeding values of forage. What relation the results may have to human nutrition cannot be predicted.

Another project will be conducted to

determine the effect of different nitrogen levels in the soil on the protein content of corn. The protein content of corn may be a deciding factor in profitable or unprofitable livestock feeding. One Illinois company has now put corn germ protein on the market as a supplement in human nutrition. Corn protein is also in great demand commercially, especially for paint and as sizing for paper.

Foods Divisions of Home Economics

We present to you—the foods and nutrition and institution management divisions of the home economics department University of Illinois. The foods and nutrition department are under the administration of Miss Janice Smith, professor and chief of nutrition. Miss Evelyn Smith, associate professor of institution management, is head of institution management. As in most University departments, teaching is the first goal. On the undergraduate level young women are trained for careers relating to food such as teaching; extension service; institution work in hospitals, residence halls, restaurants; work in commercial companies; research; and last but by no means least, homemaking.

The foods and nutrition department has as its main objectives teaching, research, and extension service. The major areas of concentration very broadly defined are:

Foods, dealing with such things as preservation of the quality of food for maximum palatability and conservation of nutrients; nutrition, a study of which nutrients and how much of each are needed for different age groups, and dietetics or applied nutrition, covering such things as planning proper diets for man in sickness or health. These are closely interwoven into the science of food and nutrition.

In addition to courses given to home economics majors, certain courses are given for any other student in the University who is interested. Basic principles of nutrition, preparation of different types of foods, menu planning and service, are among the topics covered. Non-academic night courses have been offered to veterans' wives in the past.

Extension service, really another form

of teaching, which brings University information to rural areas is closely allied with research. The extension brings the practical problems of the homemaker to the members of the research staff, and they attempt to find solutions. Because of publication difficulties, frequently information of the research department, in a more practical form, reaches the homemaker before it does the journals. Ideally this service would reach all areas, non-rural as well as rural.

The purpose of the research program is three-fold. The first of these is to serve as a teaching device. As Miss Smith says, "Girls who can actually go into the laboratory understand more what it is they are trying to learn." The second purpose is to solve some of the problems of homemakers in maintaining the health of the human race.

THE STAFF OF THE FOODS DIVISIONS

To introduce the staff of experts who are in charge of this program, first we present the person in the position of administration in foods and nutrition. Miss Smith, already mentioned, obtained her Ph.D. under W. C. Rose, Ph.D., head of bio-chemistry department, U. of I., internationally known for his work on amino acids and discovery of threonine. For six years Miss Smith was engaged in human nutrition research at Pennsylvania State college. In 1943, she was nutritionist with the war food administration, USDA, and in 1944 she came to Illinois to take her present position. Miss Smith has many interests other than nutrition. She is particularly fond of music, and has an impressive record collection. She also finds time to knit, and those good-looking knit dresses you see her wearing occasionally are her own product. But to quote Miss Smith, "I don't like just sittin' and knittin' and listening to music." She's very fond of horseback riding and likes to skate and swim.

And next is the other Miss Smith, head of institution management division. She did her graduate work at Columbia university. Miss Smith has traveled quite widely in Europe. She once took a cruise up the St. Lawrence river region, through the British Columbia waters and up to Newfoundland and Labrador. Particularly interested in the foods of the various countries, Miss Smith enlivens her classes with bits about them.



MISS JANICE M. SMITH
Professor of Nutrition, Home Economics
Department

A colorful person in the food extension program is Miss Grace Armstrong. Her contributions to the school lunch and food conservation program throughout the state are recognized nationally. In charge of teaching undergraduate

foods is Mrs. Pearl Janssen. Mrs. Janssen returned to the staff this year after eight years spent at Cornell university of Iowa.

Miss Francis O. Van Dyne, a graduate of Vassar, heads food research. She obtained her Ph.D. degree from Columbia university, under H. C. Sherman.

Another person in nutrition research whom you should know is Miss Mildred Bricker. A graduate of the home economics department, she continued her study at the University of Illinois receiving her doctorate degree in animal nutrition in 1945.

Miss Harriet Barto, associate professor of dietetics not only trains students, but has given real service to physicians and lay persons through her practical advice and popular bulletins on dietetics. Incidentally, she has as her hobby horseback riding and makes a stunning figure on "Macgregor," her spirited steed. ("Mac" is a Standardbred trotter. Miss Barto bought him when he was three years old, and she has had him for twenty years. When he was 17 he came into the hands of an excellent horseman and trainer who taught him to jump. He was still jumping at 23. Last summer at 23, he was entered in his first horse show, in Vermilion county. He won a blue ribbon in the pleasure class in a show against 23 other entries. He also won first in pairs of pleasures in which his partner was a four-year-old.)

NEW SLANTS ON FROZEN FOODS

Prominent among the various problems facing the modern homemaker is that of the preparation, storage, and conservation of the nutritive value of frozen foods. The home economics department at the University of Illinois has for some time sponsored research in an attempt to solve such problems. In charge of research with frozen foods is Miss Francis Van Dyne.

The study of frozen foods offers many opportunities for research. In the foods laboratory there have been three main objectives: 1. directions which the homemaker could use in the preparation of fruits and vegetables of highest quality; 2. a study of the vitamin content of foods during preparation for freezing and during freezer storage and 3. knowledge concerning the freezing of cooked foods.

Many procedures for preparing fruits and vegetables for freezing have been established. However, the food division continues research with different varieties of common fruits and vegetables and considers the possibilities of freezing such foods as mushrooms, grapefruit, tomatoes, and melons. The majority of the fruits and vegetables used are supplied by the department of horticulture.

Research is being carried on in regard to vitamin content of fruits and vegetables. This project is set up essentially, to determine the effect of freezing on two vitamins, namely, riboflavin and ascorbic acid. Most of this work is being one on vegetables which have gone through varied preparatory and freezing processes. Recommendation
(Continued on Page 32)

Life in Diet House

By Mildred Bricker
Assistant Chief in Home Economics

Diet studies in the foods and nutrition division of the home economics department involve feeding experiments carried out with 10 healthy coeds. The girls live together in a special research house provided for them by the University. They get food which is specially prepared and carefully weighed, and they drink measured quantities of distilled water. Not only must they eat all the food provided, but they must also refrain from eating or drinking anything else.

The girls have not allowed the diet to interfere with their social activities. They can be found watching others eat or even taking along some of their cookies, candy, or lemonade on coke dates. They even enjoy having dinner guests whom they serve ordinary food which is a bit different from their quite synthetic diets.

In December the girls entertained members of the home economics department and other faculty at a lovely tea. At that time they set up a sample of their day's dietary which contained very little protein. On display were 12 large protein free cookies containing mineral salts, washed butterfat, sugar, fondant, lemon juice, distilled water, and vitamin pills. The guests were allowed to taste the diet foods, but later were served other refreshments from a beautifully decorated Christmas tea table.

Informal parties also add variety to the girls' routine program. On one morning every girl appeared for breakfast in an Indian blanket for a breakfast party on the living room floor. Out of such an atmosphere came the Indian name the girls have chosen for the house, Kokunum, meaning home.

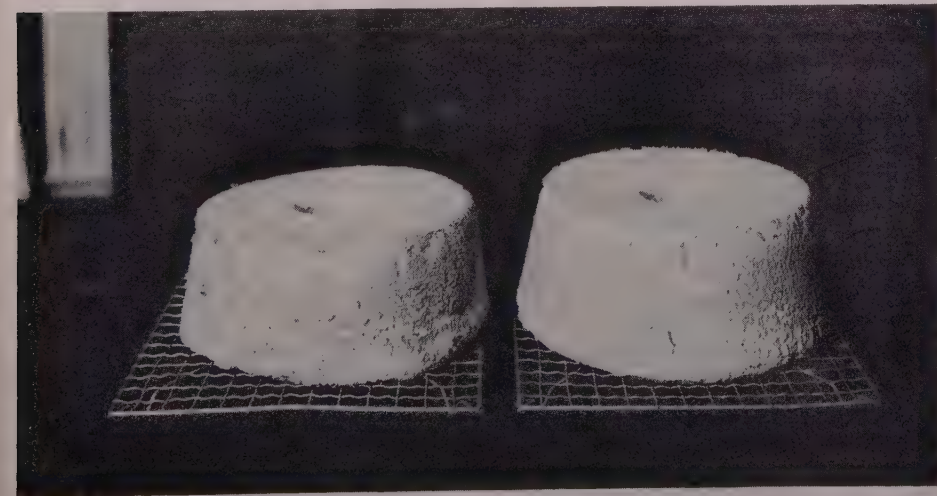
Behind all the fun and originality the girls have for making life interesting while living under a controlled regime, there is a scientific plan designed to furnish information on the kinds and amounts of protein needed by the human subject. During the year there will be tests comparing whole wheat proteins with the proteins of white flour, animal proteins versus plant proteins, or various mixtures of these proteins.

The 10 girls who are cooperating are: Jean Archer, Sandoval; Jane Ashby, Chicago; Lois Bruinkool, Oak Park; Virginia Duvall, Beloit, Kansas; Vivian Johnson, Edwardsville; Rose Watanabe, Glendale, Arizona; Rosemary Gleeson, Chicago; Eleanor Kelley, Canyon City, Colorado; Mary Harner, Martinsville; and Mary Lou Robinson, Chicago.

Illinois is a long state, extending from 37 degrees latitude in the south to approximately 42 degrees and 30 seconds in the extreme north.



A. Methods of packaging pies in preparation for freezing. The picture shows how both baked and unbaked pies can be frozen—Mrs. Royene Ownes is using cardboard pie plates, and they will be thinly sealed with cellophane.



B. Angel food cake—baked previous to freezing. Right, freshly baked cake—notice slight loss in volume due to freezing. There was no affect on eating quality.

Cafeteria Management

... Bevier Hall Style

By Mary Hansen

In the traditional Georgian room on second floor, Bevier hall, special dinners planned and served by the girls themselves constitute the main project of the institutional management majors here at the University of Illinois. Last year a "shortage banquet" was held.

Centered around a special theme, usually some phase of American food, these banquets provide the atmosphere, food, decorations, and service which portray their central idea. The "shortage banquet" featured certain types of foods which were prepared in such a way as to save considerable amounts of fat, meat, and sugar. Other themes used recently have included "Foods Served Along the Mississippi," "We've Been Rationed," and "Foreign Influences." Under the direction of Miss Evelyn Smith, associate professor of institution management, these girls learn how to bring together their economic, aesthetic and scientific training and direct it toward the service of food.

The Georgian Inn is the name the girls have given to the regular cafeteria in Bevier hall when it is being used for the special banquets. Usually the first dinner of the year is served to the Home Economics club members and home economics faculty. The other banquets, by invitation only, are served to faculty groups and their guests. These invitations are always much in demand.

Because so many people are now

obliged to eat meals away from home, the problem of group feeding has become of increasingly greater significance. With the emphasis on and knowledge of nutrition today, people need not eat as haphazardly as they did in the past, and trained dietitians safeguard the health and well being of those who eat in well-organized restaurants, cafeterias, hospitals, and schools. In



Elizabeth Loewan and Helen Moyers prepare salads for the Bevier Hall cafeteria noon meal

order to train these dietitians and food service managers for this field, curricula in institution management and hospital dietetics have been established in most of the large universities.

Since more than a knowledge of food and institutional management from textbooks is important, the practical experience given the girls at the Univer-

sity of Illinois is of primary importance. The home economics cafeteria in Bevier hall, one of the oldest in the country, was established in 1913, and affords excellent practical experience in planning, preparing and serving of food to groups of people. The girls have lessons in managing food for normal people, catering problems, feeding the sick, and in addition, practice in quantity food work and procedure. Many girls take internship training at recommended hospitals or restaurants before they look for a position. While still in the University, these girls take a week's trip to Chicago to visit markets, hospitals, hotels and large cafeterias to gain more knowledge for future positions. The field for food service managers

and dietitians is not crowded. With so much social life centered around eating, some of the senior girls in the University want to start their own tea rooms after graduation. In all well-organized institutions you will find professionally trained dietitians. The University of Illinois has about 15 alumnae on the campus today who are dietitians or managers at the Union cafeteria, Bevier hall cafeteria, and several of the residence halls. Many home economics graduates were dietitians in the army stationed at base hospitals in India, Austria, Japan, and other parts of the world. Others worked with UNRRA directing diet surveys and emergency feeding stations or with the Red Cross. An alumna of this University is now the editor of the American Dietetic Association Journal. These are but a few of the many opportunities afforded to both men and women who are well trained in the field of institutional management or dietetics.

Keep shields over revolving power-take-off shafts. Many accidents occur at these places when machines are left unprotected.

Organic matter binds soil particles together like hair in plaster, enabling the particles to resist the action of run-off water.



Herbert Neumeyer, student in Institution Management, is removing pies from the oven in the Bevier Hall cafeteria kitchen

National 4-H Club Congress

Just pin a four leaf clover to your lapel and we'll take a spin into the twenty-fifth anniversary of National 4-H Club Congress. Delegates for the congress must be selected from outstanding state members, honors which every club member sweats and strives toward. Since everyone cannot go, pull up a chair and we'll investigate the reactions of these 1,400 state celebrities on their six-day stay in Chicago.

As you know, over 30,000 4-H club members have benefited greatly from the splendid programs sponsored by the National Club Congress that has been held each year since 1922. These young people have come not only to add materially to their own experiences but to act as emissaries, thus transferring and receiving viewpoints on a world-wide basis. It is quite evident that these 1,400 delegates have a large responsibility representing their 1,700,000 fellow club members. In discussing this year's challenging congress theme, "Build Citizenship in a World Community," as was demonstrated very vividly that the true American spirit was prevailing in its highest degree.

From early in the morning until late at night we were constantly absorbing valuable experiences and information. During the mornings, they divided their time between general assemblies and group discussions. Assembly speakers included John L. Strohm, president of the American Agriculture Editors' association, who recently returned from a trip through Europe and the USSR; M. L. Wilson, director of extension; Maynard H. Krueger, assistant professor of economics, University of Chicago; and Charl Armond Williams of the National Education association. The delegates were divided into 15 groups where they discussed debatable questions arising from the lectures. A few of the thought arousers were: 1,000 4-H'ers in Russia for 60 days in 1947 would improve Russia-United States relations more than a visit to the United States by Stalin; overproduction of crops causes more international problems than do undernourished peoples; and wars are inevitable. Can you pass a definite opinion on these three? This was democracy at work. With representatives from the 48 states, Chile, Nicaragua, Ecuador, Mexico, Peru, and Palestine sitting next to you, it was very interesting to receive their viewpoints concerning issues of "Building Citizenship in a World Community."

"The young people of today are just arriving at the cross-roads of history," pointed out one of the speakers. "The 4H'ers of today have stepped into the scene at a most critical but hopeful

By Russell Lewey and Jean Neese

time." The associates of industry were quite pleased with the leadership abilities exhibited by this sample of the new generation.

We shall move from the morning assembly program over to Orchestra hall and see what was in store for us when we were guests of the Sunday Evening club. In addition to the regular Sunday evening broadcast, a pageant was given illustrating the potentialities of 4-H members, which provided a very inspiring program.

The eight stepping stones presented were:

1. Developing talent for greater influence.
2. Joining with friends for work, fun, and fellowship.
3. Learning to live in a changing world and choosing a way to earn a living.
4. Producing food and fiber for home and market.
5. Creating better homes for better living.
6. Conserving nature's resources for security and happiness.
7. Building health for a strong America.
8. Sharing responsibilities for community improvement.

To offset the serious side, special programs were provided; such as the WLS National Barn Dance, in which we Illinois delegates took part. We visited the Breakfast club, starring Don McNeill, and also saw Phil Spitalny and his all-girl orchestra.

Memorable banquets were provided by Thomas E. Wilson, International Harvester, Firestone Tire and Rubber

company, Swift and Company, Sears, Roebuck and Company, Montgomery, Ward and Company, General Motors company, Illinois Agricultural association, Spool Cotton company, Producers Livestock Commission company, and the Chicago Chamber of Commerce. Programs at these banquets were highlighted by Spike Jones and his City Slickers, James Melton, Bob Feller, Russell Firestone, Thomas E. Wilson, Mr. and Mrs. Henry Ford II, and nationally prominent sports celebrities. Everett Mitchell, Lloyd Burlingham, and many others were featured as after-dinner speakers.

Various tours were conducted to the major interest spots of Chicago. In the Institute of Science and Industry, we saw the Harvester Home and Farm, which is only one of hundreds of the miraculous sights. The Art Institute, Natural History museum, Board of Trade, and the greatest livestock and grain exposition in the world were others.

In addition to speeches, discussions, sight-seeing tours, we were given informative demonstrations. Some of the exhibitions were illustrating the principles of ultra-violet light, infra-red rays, jet propulsion, synthetic process of making rubber, and the latest phonograph record which is a coil of wire.

Now, don't you think these rural young people had a very interesting week at National Club Congress? However, here is one more point to be concerned with stated by Mr. G. L. Noble, head of the national committee on 4-H work: Mr. Noble said, "I have yet to hear of a delinquent 4-H club member. Therefore, it is proposed to put forth all effort to increase the present membership of 1,700,000 to our goal of 5,000,000 in the very near future. It can be done!"

OMICRON NU INITIATES NEW MEMBERS

Omicron Nu, national home economics scholastic honorary, initiated six members at a dinner meeting in the Colonial room, Illini Union, December 6.

The new members who were initiated are: Dorothy Ann Price, junior in textiles and clothing; Lois Jane Bland, Wihneta Tayler, and Ruth Johnston, seniors in vocational home economics education; June Baum, senior in foods and nutrition; and Mrs. Charlotte Neville Crowe, senior in home economics. Mrs. Crowe received the Borden award in 1946 for highest scholarship in the senior class.

Only home economics majors of junior or senior standing and with scholastic average of at least 4.5 in their

junior year or 4.25 in their senior year are eligible for membership. Omicron Nu finances foreign scholarships and research fellowships in cooperation with the American home economics association to promote leadership, and research.

Miss Doris Brockway, assistant professor of home economics, is sponsor of the organization and is assisted by Miss Angeline Hellerburg, instructor in home economics.

The election of new officers of Omicron Nu was held December 11. The new officers are as follows: Jane Bland, president; Dorothy Price, vice president and chairman of the program of work; Wihneta Tayler, editor and secretary; and June Baum, treasurer.

YOUTH ASSISTANTS ANOTHER SERVICE OF EXTENSION

Why has our 4-H enrollment increased considerably throughout the state this past year? One very logical answer to this question might be a bill that was passed by Congress in July, 1945. This bill, the Bankhead-Flanagan act, allocates a given sum of money to each state on the basis of their potential youth within their state. Therefore, it is possible that one state may receive a larger or smaller sum than another. Each state plans its own means of making use of this money, and in Illinois, the funds are placed in the hands of the various counties which benefit from it in the best way possible.

With a reserve fund such as this in the counties, they find it possible to employ people to work with the farm and home advisers to strengthen the youth work, mainly 4-H clubs and Rural Youth. Young married groups are included in the youth programs in a few counties.

There is no set pattern throughout the state in hiring these youth assistants. In many counties only one youth assistant is employed and it is his duty to manage all the youth work in the county, including both the agriculture clubs and the home economics clubs. Occurring frequently is the employment of a woman for the home economics activities and a man to manage the agriculture 4-H clubs. Another system used in two counties in Illinois is the "two county set-up." A woman in one county is hired to handle the home economics 4-H clubs in the two counties. This system seems to be very successful in Woodford and Marshall-Putman counties.

If a person can qualify, he may be hired as an assistant farm or home adviser, as is done in a few counties, de-

pending on the capacity that the county finds itself. His work is specifically to strengthen and enlarge the youth work. He must have the same educational qualifications as the farm and home advisers since he must substitute for them at any time.

Because the standards are kept high to qualify for youth assistant's work, there are not enough people to supply the demand at present. For this reason one sees great prospects for this vocation in the future. To qualify for this work one must be a college graduate, preferably with a degree in home economics or agriculture. In some special cases those people who are in closely related fields, such as sociology, are employed, but first consideration is given to agriculture and home economics majors.

At present more than half of the counties in Illinois are taking advantage of these funds made possible by the Bankhead-Flanagan act. More will follow in the future. Already training schools have been held to acquaint the new youth assistants with their work and to keep them informed on all up-to-date information as they go along. The national goal for 4-H club members for 1950 is 3,250,000. It will be the youth assistant's responsibility to reach this goal and each one will be striving to do so by 1950.

This program to strengthen and enlarge the 4-H clubs and other youth organizations is under way in all parts of the United States. At the moment the program is very flexible with each state working to find the means of making the best use of these funds. 4-H club enrollment in Illinois has materially increased since the program was inaugurated in 1945, which gives an indication of greater future development.

ALPHA ZETA

The Morrow chapter of Alpha Zeta, national agricultural honorary fraternity, located at the University of Illinois, Urbana, Illinois, announces the initiation of eight men into active membership. These men are selected on the basis of high scholarship and abilities in leadership in the field of agriculture.

The formal ceremony was held on Sunday, December 15, 1946. W. Brady Anthony, Waco, Texas; Charles E. Botterbusch, De Soto, Illinois; John R. Bartley, Saunemin, Illinois; Jerome C. Lyons, El Paso, Illinois; George W. Janes, Murphysboro, Illinois; Donald N. Duvick, Sandwich, Illinois; Paul J. Ferree, Mattoon, Illinois; and Robert H. Mitchell, Thompsonville, Illinois, are the new members.

4-H BOYS STUDY FOODS AND CLOTHING

Four-H club girls have often taken part in various 4-H agriculture projects. Now the boys of LaSalle county's 4-H clubs are to have their chance at foods and clothing projects, according to Miss Helen Elliot, assistant home adviser.

The clothing clubs will teach the selection of types and colors in men's suits as well as the art of patching and darning. Baking will probably be the main project in the foods clubs. Rules and regulations for becoming a gracious host will also be stressed.

Under normal conditions, mature ear corn is husked and cribbed in the fall at moisture contents of 18 to 25 per cent.

Food Cost Project Planned

Planning a diet adequate in essential food nutrients and moderate in cost at today's prices is the problem confronting most homemakers everywhere, and this practical problem has been made a project in one advanced dietetics course of home economics. The young women in the course are given imaginary families composed of a father and mother, a girl 11, and a boy 14, and they plan a week's menu, adequate nutritionally at moderate cost. The presumption is made that the family members are of average weight, height, etc., for sex and age, that they do not have a garden, and have not been able to can or otherwise preserve food as is the case in many urban homes. First the girls are doing a price study in local stores. Earlier in the course a study was made of the recommended allowance for vitamins, minerals, carbohydrates, fat, and protein, and a list of practical sources, or foods containing in one serving at least one-tenth of a day's supply of a given nutrient was made.

Look for the results of this study in the next issue of the *Agriculturist*.

Proper Storage Important Part Of Home Canning

Wouldn't it be grand to have row upon row of your home-canned food arranged attractively on neat, convenient shelves—and what is more important—where damage to the food is least likely to occur?

The top shelf in the kitchen cabinet is no place for the precious food upon which you have spent so much time, energy and money. Such a location would be too warm for the food to keep well, and it is usually difficult to reach. Ideal storage space is dry, reasonably dark, clean and cool, but free from all danger of freezing temperatures. The cans should also have a limited amount of air circulating around them. A separately enclosed fruit room in the basement probably provides the best conditions, according to agricultural engineers of the University of Illinois College of Agriculture.

However, a well-built and carefully placed storage cabinet in the basement or, if necessary, in the kitchen would be satisfactory. The open shelves will suffice, although they are less desirable.

It is no simple task to find lumber for such a project these days, but used boards, scrap lumber, boxing or rough

(Continued on Page 34)

*So tomorrow's farmers
can have Better Corn*

DEKALB'S SEARCH FOR NEW IMPROVED HYBRIDS GOES ON AND ON - - -

What was new in corn last year may be far behind the times a year from now—for DeKalb's "search through research" for superior hybrid varieties never stops. Working in close harmony with leading scientists, DeKalb's corn breeders combine the pure science of genetics with their practical knowledge of corn growing and the farmer's corn requirements, to build a new efficiency in corn—better hybrids this year than last—still better hybrids in the years to come.



PROGRESS IN CORN IMPROVEMENT OPENS NEW OPPORTUNITIES FOR AMERICAN YOUTH

Today's youth has probably seen more "history in the making" than any one other single generation. In the span of a few short years, man's way of life has undergone change after change. Science and invention have decreased labor, increased production, lowered cost and added to profits. New frontiers have been opened in every walk of life—a new standard of living has arisen and youth today stands on the threshold of a new freedom which embraces more opportunities than ever before offered mankind.

The development of hybrid corn has been, and will continue to be a contributing factor in helping American farmers, both old and young, reap more wealth from their land. DeKalb works hand in hand with men of the soil—devoting tireless effort in developing hybrid varieties which will make farming easier, faster, more productive, more economical. To our American youth of today, this means hope, ambition and wealth. To their fathers, it means contentment and security.

DEKALB AGRICULTURAL ASSOCIATION, INC.
DEKALB, ILLINOIS



DEKALB

A Great Yielding Corn

Child Psychology is Practical

U. of I. offers courses in Child Development under direction of Dr. Nellie L. Perkins

By Jean Dierkes

To increase knowledge of child nature for professional and parental interest is the aim of the child psychology department of home economics at the University of Illinois.

Nellie L. Perkins, head of child development, home economics department, University of Illinois, came here seven years ago to establish our courses. She received her training at the University of Michigan and at the University of Chicago (Rush Medical college). Included among the numerous positions previously held by Miss Perkins are: professor of social psychiatric case work at the University of Michigan; director of case work with social agencies in Detroit; setting up the child development laboratory at Cornell University; director of the Psychopathic Clinic in the juvenile court in Detroit; and maintaining a private practice in children's behavior problems.

Children Need Love and Understanding

Children require much love and understanding in their home life. Most parents fail their children in this respect, because it is difficult to look at things from a child's viewpoint. Children do not think as adults; their limitations must, therefore, be understood. They lack physical development, orientation, and emotional stability. The pre-school days, the days spent at home with mother and father, are most important for training. Parents should know what to expect from their child at various ages. Too many parents are over anxious about their Jimmy if he doesn't learn to walk as soon as the little boy down the street. Parents should be educated to know that each child is different and will have different problems. Having two or three children does not necessarily make a person a better mother for the next child than a mother with her firstborn.

The attitude of a child is extremely vital in the effect upon its life. Children must be happy. An objective attitude toward a child is necessary at all times. Their mistakes are to be accepted as such and not as intentional or deliberate acts. One must learn to determine whether a child is misbehaving or if it is a misunderstanding.

Children respond to action better than words. Provision of play space, equipment, and time are essential in their lives. To a child, play is its main business. Satisfactory companions, pleasant atmosphere, and well planned schedules are also important as inconsistency is

very confusing to a young child. When one day he "gets away with something" and then the next day is punished for that same act, the child's life becomes too complicated for him to comprehend what is expected of him. Discipline, when used, must meet the needs of the situation. It must also follow the act in order that the child know why he is being punished.

To be wanted, loved, understood, and enjoyed are all needs of a child, and parents are best able to fulfill these needs for their child. The parent's part in this problem is to continue to develop themselves, physically, mentally, socially, and emotionally. Provision of a controlled environment, a calm, serene atmosphere in the home, and a broad range of experiences is up to the adults in the family. Social values have to be transmitted and interpreted to the younger set.

Child Development Laboratory

The principles of child psychology are presented in a number of different ways. One common method is lectures, but one of the most valuable parts of the University department is the child development laboratory where the students may observe children at play under the supervision of trained personnel. Advanced students have an opportunity to work with the children under close supervision and gain confidence in the use of the newer methods of child care. Due to the shortage of housing, this laboratory is temporarily closed. This is a great loss to the department and it is hoped that soon there will be appropriations made for the much needed building to house this laboratory. Under the supervision of Miss Perkins and her trained assistants, children from three to five years come to the nursery school for one-half day periods. The children who attend are chosen according to standards which have been set up. While these children play, students observe their behavior from behind a screen. The students hear lectures and then observe the things they have heard about. They see how the children are handled under varying circumstances. This course, home economics 56b, is open to students in any college who have had psychology 1 and are of junior standing. Men as well as women will profit from taking such a course.

In addition to the university credit courses which Miss Perkins teaches, she

has special extension courses. These are semi-popular courses offered to wives of veterans and townspeople who do not desire university credit. A six weeks series on "Play Techniques With Young Children" is to be started in the near future.

Special Application

As an example of special application of the child psychology principles, Mrs. R. J. Mutti, former teacher of child care and development at the University of Illinois, has offered some suggestions which she applies in taking care of her seventeen-month-old daughter, Jane.

Mrs. Mutti's earliest form of training consisted of saying no, and lightly spanking Jane's hands when she insisted upon playing with good books. Although a positive approach is important, the child must learn the meaning of "no." Mrs. Mutti explains that most mothers merely say "no" without following up with some constructive suggestion for the child. The father's help in routines such as dressing and feeding is also heartily recommended by Mrs. Mutti, because that is the father's only contact with a very young baby. As in principles, the positive approach should also be used in routines. The parents should expect the children to help themselves, but should also remember that it takes time and patience.

Mrs. Mutti graduated from the University of Illinois in 1941, and received her master's degree in 1943.

The child development department is training mothers and fathers for better family living and home life, and orienting students for the teaching profession.

Agricultural Jobs Offered Abroad

Rex Johnson of the United States department of agriculture told of opportunities in foreign service for agriculturists at a faculty meeting December 13, and at a meeting of graduate students on December 14. Johnson, who is assistant director of the office of foreign agricultural relations, United States department of agriculture, explained the organization and duties of the office of foreign agricultural relations.

The OFAR is as closely allied with the state department as with the USDA, and has the purpose of giving agriculture a voice in the foreign policies of the state department along with that of labor and commerce. During the war

(Continued on Page 32)

“...and it grew
LIKE SIXTY”



THERE have been, in this country, prophets of doom without end. They've looked into their murky crystal ball and foretold the dismal end of our country, our freedom, and our civilization. They've watched through wars, panics, and financial depressions, and predicted, in each case, the end of all the things upon which America is built and for which it stands. Yet, in spite of all their prophecy, the country came through “and it grew like sixty”.

In spite of present prophets of doom, our country will continue to develop and grow, as long as free, intelligent enterprise guides productivity of the soil, from which all wealth springs, and of industry which fabricates the produce of the soil. As long as free enterprise is guided by native intelligence broadened by free education, the developments of the future will exceed, by far, those of the awe-inspiring past, and our country, repeating its illustrious history, will continue to “grow like sixty”.



JOHN DEERE

•

MOLINE • ILLINOIS

Tolono Instructor Praises UI Student Teachers

By MRS. GENEVIEVE KROUSE
Instructor at Tolono High School

For a number of years Tolono High School has had student teachers in home economics from the University of Illinois. Both faculty and students are glad that the University sends us these teachers.

There are several reasons why we like to have student teachers. They bring with them ideas from their high school homemaking classes and from their college classes. Better still, they have ideas of their own for presenting material.

We like to have student teachers because they come with up-to-date information on nutrition, textiles, household equipment and many other phases of homemaking. This is an added incentive for the homemaking teacher to keep her own information up to date by continuous study.

Student teachers come with enthusiasm for their work. Almost without exception, they want to make good at this first job of teaching.

Because we have student teachers, we receive help, suggestions, and stimulations from the supervising teacher from the University. This teacher trainer does not dictate in any way what shall be taught, how it is to be taught, or what equipment shall be purchased, but her advice is gladly given when it is requested.

The cooperating teacher does not need to stretch her imagination to see growth and development in the student teachers. They seem to mature almost overnight. Bobby sox, sloppy sweaters, and other collegiate attire are left behind when the girls go out to their teaching center. As two student teachers got off the bus at their teaching center one Sunday evening, they were surprised to hear one of the passengers remark, "Those must be school teachers." There are more evidences of this sudden maturity than a change of wearing apparel. As the student teachers leave the campus to live in their new community, they seem to have a new seriousness and sense of responsibility for a very real job.

Student teachers find that lessons require much more planning and preparation than they had ever thought would be necessary. Because a lesson is poorly planned, the student teacher may find herself left with a stack of dirty dishes and laboratory equipment as the class bell rings and her pupils leave for their next class. A student teacher gets a good many practical lessons in good management.

They learn, too, that there is more to teaching than planning lessons. They find that it is as important to know the

U. of I. Fat Stock Place at International

The University of Illinois fat stock exhibit of both cattle and swine placed high at the annual International Livestock Exposition held in Chicago November 30 through December 8. Among the 22 placings carried away by the U. of I. stockmen were two reserve championships.

The fat cattle department had exceptional results with its exhibit. Showing only 8 animals, they collected 10 placings and one reserve champion rating. The winning classes and their placings are as follows: 5th lightweight Hereford steer; 5th light-mediumweight Hereford steer; 7th group of three Hereford steers any weight; 3rd lightweight Angus-Short-horn heifer; 15th light-mediumweight Angus-Short-horn steer, this individual also placed 5th in the carcass class; 7th heavy-mediumweight Angus steer; 6th group of three Angus steers and heifer; and in the sweepstake carcass class of lightweight carcasses under 1,000 pounds a Shorthorn-Angus steer was judged 3rd on the hoof, 1st on carcass, and later named reserve champion in the carcass show.

The steers sold well at auction. The reserve champion carcass was sold for 95 cents per pound to the 1st National Bank of Chicago. The other 7 animals sold for prices ranging from 38 to 41½ cents per pound. The prize money won by the cattle amounted to \$265.

The swine department also accomplished satisfactory results with its exhibit by winning 10 ribbons and a reserve championship. The winning classes and their placings are as follows: 1st lightweight Chester White barrow, later in the show this individual was judged reserve champion of the breed; 2nd lightweight pen of Chester White barrows; 3rd lightweight pen of Duroc barrows; 5th lightweight Duroc barrow; 4th mediumweight pen of Duroc barrows; 5th mediumweight Duroc barrow; 5th heavyweight pen of Duroc barrows; 5th heavyweight Duroc barrow; 3rd Duroc get of sire; and in the sweepstake competition 3rd pen of ten Duroc barrows which were judged both on the hoof and in the carcass. The prize money won by the swine amounted to \$130.

students as it is to know subject matter. A study of the community, participation in community events, home visits, and observation of students in the classroom and outside of school are a part of their teaching experience.

The cooperating teacher finds that all student teachers are different. Some like to cook and are very good in work with meal preparation. Others are especially good in clothing construction, in fitting dresses, or in making purses and gloves. Another student teacher will prefer work in art, furniture arrangement, and home furnishings. Some student teachers lack confidence in themselves; other are over-confident. Some are quiet and reserved; others are more aggressive.

Some people may wonder just what the cooperating teacher does with her time when there are two student teachers teaching her classes. She is just as busy as she is when she is doing the teaching job herself. She finds materials for the student teachers to use; she helps them with their teaching plans; she goes over techniques of sewing or cooking with them; she goes with them on home visits. Instead of doing the teaching job herself, she does it through the student teachers.

One often hears a teacher say, "I learned a lot during my first year of teaching. I think I learned more than the pupils did." A cooperating teacher can certainly say, "I learned a lot about teaching during my year with student teachers. I am glad to have student teachers."

Farm Ponds Used to Supply Water for Livestock

The use of farm ponds to supply water for livestock has become a common practice in areas where wells are not dependable, says B. F. Muirheid, extension agricultural engineer, University of Illinois college of agriculture. These ponds are not the mud-puddle variety, but are carefully built to furnish an ample supply of clean, sanitary water on the right part of the farm.

Features which are important in the successful use of a farm pond include choice of watershed, construction of the dam, provision of an adequate spillway and fencing of the pond itself from livestock.

The watershed area must catch enough rainfall to meet annual requirements. If the size of the watershed is out of proportion to the size of the pond, the cost of the spillway will be excessive. Three to five acres of watershed are necessary for each acre-foot of water to be stored. Watersheds in permanent sod or ungrazed woodlands are most desirable, since any erosion rapidly fills the basin with silt, decreases the water-storing capacity and shortens the useful life of the reservoir.

Before starting the dam, make sure that the site is completely cleared of all topsoil, brush, grass and other organic material.

Commercial canning began in the United States in 1819.

ZINC

for LONG-TIME, LOW-COST
PROTECTION AGAINST

RUST



The "Seal of Quality", shown above, is the yardstick of economy in buying galvanized sheets. It signifies at least 2 oz. of Zinc per square foot!

The U.S. Bureau of Standards, Circular #80, says, "... by far the best" protective metallic coating for rust-proofing iron or steel is ZINC. Zinc, in the form of galvanizing, protects against rust in TWO WAYS: First, by simple coverage, with a sheath of rust-resistant metal . . . Second, by electro-chemical action, or "sacrificial corrosion." That's why industry has long depended on ZINC to stop rust—cut costs—save materials. Heavy coatings pay—for the heavier the coating, the better the protection, the longer the service life and the lower the cost.

FREE BOOKLETS

WRITE TODAY for these valuable booklets: (1) Repair Manual on Galvanized Roofing & Siding (2) Facts About Galvanized Sheets (3) Use Metallic Zinc Paint to Protect Metal Surfaces (4) The Zinc Industry—Mine to Market.

American Zinc Institute

Room 2617 —35 East Wacker Drive, Chicago 1, Illinois

LAW ON RURAL TRESPASS DISCUSSED

Trespass by Animals. In a recent number of this series, the law on rural trespass was discussed. Of equal or greater importance to farmers is the law on trespass by other people's animals. Someone's cows may do more damage in a few hours than the hunters and picnickers accomplish in several years. The earliest legislation on this subject appeared in 1819. Since that time it has been revised five times, the latest occurring in 1935. The present law reads:

"If any horse, mule or ass, or any cattle, hogs, or sheep, or other domestic animals, shall break into any person's inclosure, the fence being good and sufficient, the owner of such animal or animals shall be liable, in a civil action, to make good all damages to the owner or occupier of the inclosure. This section shall not be construed to require such fence, in order to maintain an action for injuries done by animals running at large contrary to law."

It is further provided that trespassing animals may be taken up and retained until their owner makes good the damage done. However, the person taking them up must notify the owner within 24 hours, or, if the owner is unknown, post notices at some public place near the premises. The Illinois courts, in interpreting this law, have laid down the following principles:

1. A landowner may recover damages when an adjoining owner's cattle

break through the latter's part of a division fence, even though the owner's part of the fence is also defective.

2. When the adjoining owner's animals break through a landowner's part of a division fence, the latter, in order to recover damages, must show that he was not negligent in keeping his part of the fence repaired. Unless this can be proved, he cannot lawfully hold the trespassing animals.

Under certain circumstances, damages may be recovered for trespass by animals even though the landowner has no fences. This situation is covered by a law enacted in 1895 prohibiting domestic animals from running at large. If an owner does not use reasonable care in restraining his animals and allows them to roam the countryside, he will be liable in damages to anyone injured, fence or no fence. This same act also provides for a township pound where such animals may be retained and eventually sold by the poundmaster if not claimed. Owing to the complete settlement and fencing of farm lands and to the financial interest of owners in their animals, this law is little needed at the present time. However, an occasional owner does not seem to care where his livestock reside or what they do. These laws afford some protection against such individuals.

The laws referred to may be found in the Illinois Revised Statutes, Chapter 8, Sections 1-5 and Chapter 54, Sections 20-21.

4-H Training School

The University of Illinois extension service has inaugurated a leadership training school for the 4-H leaders of the state through the conduction of all-day district meetings. At these meetings, a comprehensive program will be presented consisting of speakers, discussions, and recreational and musical instruction.

The theme of this year's program, "Building Citizenship in a World Community," is being presented to the district groups by the following prominent 4-H directors: J. W. Whitehouse, state 4-H leader of Kentucky; C. C. Lang, state 4-H leader of Ohio; A. G. Brundage, state 4-H leader of Connecticut; and T. A. Erickson, former state 4-H leader of Minnesota.

The recreational instruction will be under the supervision of Mrs. Lucille Pocklington, Macoupin county assistant home adviser, and Miss Ruth Purdue, youth director of the Decatur First Presbyterian church. The introduction of new musical activities will be presented by Miss Florence Kimmelshue.

Prior to 1946, the leadership training was included as a part of the annual Farm and Home week program. Dur-

ing this week the 4-H leaders, county committee members, and other interested people journeyed to the University of Illinois campus to obtain information that would aid them in the 4-H activities for the coming year. However, many of these people were unable to attend because of the great distance and therefore, a large percentage were unable to take advantage of the information given.

In order to reach a larger percentage of the 4-H leaders, the 4-H extension service has divided the state into 19 equal districts and is operating a mobile 4-H leadership training school. This procedure was adopted last year and was proven to be a satisfactory means of contacting a majority of the local 4-H leaders. Although the attendance at these district schools ranges from only 50 to 200 people, the material can be presented to these small groups more effectively and more thoroughly than to large groups at the state-wide meetings.

About one-half of the 1946 Illinois soybean acreage was sown to the Lincoln variety compared with 11 per cent planted to that variety in 1945 and only 1 per cent in 1944.

Orchards on Contour Save Soil, Moisture

Planting peach orchards on the contour like grain crops is the best way to solve the soil erosion problem, asserts V. W. Kelley, extension horticulturist, University of Illinois college of agriculture. Contour planting is a relatively new practice for orchards, only 15 or 20 Illinois peach and apple orchards having been planted on the contour in recent years.

Demonstration plantings will be held this fall on the farms of Ben Spiller, Union county, and Albert Wiedeman, Massac county, Kelley announces. A contour demonstration is also planned for the farm of Alson Myers, Marion county, in 1947 and another on the farm of Joe Hale, Marion county, in either 1947 or 1948.

There are several advantages in using the contour method: It is possible to cultivate with a minimum of soil loss because the movement of water is very slow around the slope, the rate of movement being regulated by the degree of fall. The slow movement of water down the short slopes between the contour rows and around the slopes also permits greater absorption of water, which is advantageous in drouth periods. A lesser but still worth-while advantage is the saving of power which results from performing all operations practically on the level.

Most fruit growers follow the custom of spraying and dusting with the wind, but that is not possible all the time, as the row follows the slope. Also, in most orchards there are some point rows to deal with and fewer trees can be planted to the acre.

Ag Seniors Seek Jobs

The placement service in the associate dean's office, college of agriculture, gave conspicuous evidence of its usefulness on December 9 when a job-placement meeting for all seniors in the college of agriculture was held.

One of the functions of the associate dean's office is to maintain a job-placement service for students and graduates of the college of agriculture. Although this service is centralized in the associate dean's office, it is supplemented by members of all the departments. Letters received by various staff members from organizations desiring agriculture graduates aid in securing jobs for them. Contact is established between the students and the would-be employers—and then it's up to the students.

At the meeting of December 9, seniors found that job opportunities are excellent in any branch of agriculture at the present time. The shortage of trained agriculturalists caused by the war is still existent, for there are still more jobs offered than trained men available to fill them.

TERRACES..

"Eaves troughs" for Your Farm



PICTURED here is Exhibit A in the case against soil erosion, a test tube filled with water from the mud-swollen Missouri River. There is unmistakable evidence in the $\frac{3}{8}$ -inch layer of fertile silt which has settled to the bottom of this glass tube. Here is a revealing sample of the 100,000,000 tons of topsoil swept away every year by this one river alone. When spring and summer rains begin, the Missouri's sediment load jumps from 10,000 to 3,000,000 tons a day. That's the topsoil equivalent of a 100-acre farm every five minutes.

Something can and is being done about it. Like almost every farming territory, the Missouri watershed needs "eaves troughs" — terraces and contour strips to control runoff water. Allis-Chalmers is co-operating with soil conservation engineers in demonstrating tractor methods of terracing with moldboard and disc plows, strip cropping, constructing ponds, waterways and reservoirs.

All these operations can be done with regular home-owned tractor equipment. Costly graders and heavy crawler tractors are no longer required.

By holding rain water on the slopes, modern tractor plows are providing life-giving moisture to crops and healing the cancerous erosion eating into our farmlands.

NEW HANDBOOK

"You Have What It Takes to Contour and Terrace"

Prepared by Allis-Chalmers engineers in cooperation with the Soil Conservation Service. Pictures and diagrams show practical soil-saving measures with regular farm equipment. You may obtain a copy without charge from your local Allis-Chalmers dealer, or by writing to . . .

ALLIS-CHALMERS
TRACTOR DIVISION — MILWAUKEE 1, U. S. A.

Home Fruit Planting Has a Place

By EARL URISH '49

The home fruit planting and garden still have a definite place on Illinois farms in the opinion of V. W. Kelley, associate professor of horticulture extension, and J. P. McCollum, assistant professor of vegetable crops. However, the situation has changed in a great many respects since the pioneers first settled the virgin prairies. These early farmers could grow the staple vegetables necessary for their diet and could start orchards without the serious problems of insects and diseases which are prevalent today.

Planning and Care Necessary

In order to be successful the home fruit planting and garden of today must have a certain amount of intelligent planning, care, and management. If the farmer will take the time necessary to properly manage and care for these projects they will prove well worth the time and energy spent.

When the home fruit planting is planned carefully and the planting confined to the kinds and amounts of fruit actually needed and that can be cared for properly by the farmer in connection with his other work, he will find it is an economical source of good fruit. Proper management must include proper planting, soil management, pruning, spraying, and orchard sanitation.

Fruits Supplement Diet

The home fruit planting can supply a portion of the diet that is lacking on many Illinois farms. Fruit of higher quality can be grown than can be obtained normally on the commercial mar-

ket. The fruit need not be harvested until it is fully ripened and will thus have superior flavor and aroma.

The home garden also supplies large quantities of food rich in vitamins and minerals which may be deficient in many diets. No area on the farm produces as much in real value as the well cared for home garden. It is estimated that in normal times a one-fourth acre garden easily could produce food that would cost from \$40 to \$100 at retail.

Better Vegetables Can Be Produced

Home grown vegetables are usually of higher quality and flavor than any which may be purchased. The time during which most vegetables are being transported from the producer to the consumer results in a certain amount of loss of food value and flavor, and in an increase in toughness.

Most Illinois farms do have gardens which successfully produce more or less of the farm diet during the year. However, certain improvements can be made in many home gardens which will increase the amount of food produced and reduce the amount of labor required. The long row type of garden, with vegetables grouped according to time of planting, will reduce labor in planting and cultivation on most farm gardens. Labor may be saved through the use of better equipment. For example, a small adjustable seed drill will save the work of hand planting and thinning as well as insuring the proper rate and depth of seeding. Chemical

weed killers could also be used to advantage in some cases.

Cannot Be Profitable If Neglected

If neglected, the home fruit planting and garden cannot be expected to be a profitable part of the farm enterprise. Many old, neglected orchards and weedy, unkept gardens bear witness to this fact. However, any farm family willing to devote the necessary amount of time and work to a good home orchard and garden of the proper size for their needs will find their work well repaid in a better, more wholesome, and more economical diet.

Much valuable information on home orchards and gardens is contained in Illinois Circular 524, "Growing Fruit for Home Use," and in Circular 522, "Illinois Garden Guide."

Plant Leaves Tell When To Remove Mulch

The leaves of the strawberry plant and not the calendar will tell when to uncover and rake the mulch away from the plants, points out A. S. Colby, professor of pomology, University of Illinois College of Agriculture.

When the time comes to remove the mulch, the strawberry plant leaves will begin to turn yellow under the mulch. If left longer, some of the plants will be killed. Lift the straw a little so that the leaves can grow up through the mulch, but leave most of the mulch on the ground to keep the ground cool and hold some of that soil moisture for the berries.

Early purchase and farm storage of fertilizer provide insurance against running short at planting time.

FOR SALE

SOUTHDOWN
and
CHEVIOT
RAMS—EWES

Helms Bros.

Belleville, Illinois
Rural Route No. 1

UNIVERSITY BOOKSTORE

610 E. Daniel

TEXTBOOKS
MAGAZINES
ARTIST'S SUPPLIES



ENGINEERING
SUPPLIES

Our Specialty



Phone 5726

SKELTON'S

Drug Store



617 E. Green
on the Campus



How are we going to make it? . . .

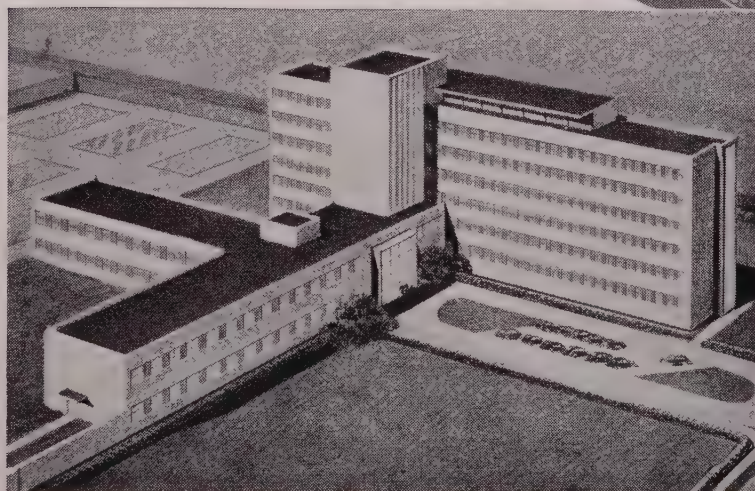
A pilot plant has yielded its result—an improved gasoline, a better motor oil, maybe a synthetic oil, maybe one of the new chemicals.

Now come the big questions. How are we going to make it—commercially? What equipment will we need? What's the best way to design the equipment? Out of what materials shall it be made?

This is one type of fascinating problem that will be tackled and solved in these engineering buildings which are to be constructed in our new technical and administrative center at Hammond, Indiana, near Chicago. Magnificently equipped, these buildings will provide our engineers every facility for taking their essential part in turning test tube dreams into useful realities.

Here will be grouped engineers following many congenial pursuits; those who design our manufacturing equipment, those responsible for our maintenance, inspection and field engineering, and our cost engineering.

Here, too, a task force of research engineers will work in modern laboratories. Some of the channels into which



their explorations will lead are:

Research in engineering materials, especially in metallurgy; physical testing of construction materials; theoretical mechanics; applied mechanics, especially as it relates to the underlying principles of engineering and the research tools needed by other divisions, and also the industrial aspects and possibilities of nuclear energy; electronic developments; exploratory engineering and estimating associated with the development of new processes and products.

These new engineering facilities will hum with such activities and others vitally important.

STANDARD OIL COMPANY (INDIANA)

910 South Michigan Avenue
Chicago 5, Illinois

Shropshire Tops Ewe Lamb Sale

A purebred Shropshire ewe lamb sold for \$192.50 at the Illinois Purebred Sheep Breeders association bred ewe sale held at the University stock pavilion on Saturday, December 14. The lamb, consigned by William Duncan of Wadsworth, Illinois, was an excellent individual, showing the desirable characteristics of the Shropshire breed. Mr. Duncan, a veteran sheepman of many years experience, said that it was the best lamb he had ever raised.

The sale was very successful from the standpoint of both buyers and sellers. Sixteen breeders sold 75 head of Shropshires, Hampshires, Southdowns, and Cheviots which averaged more than \$64 per head.

Mr. Duncan sold his entire Shropshire flock of 24 ewes and three rams for an average price of \$66. The 26 Shropshire ewes consigned by other breeders averaged \$70 each to top all Shropshire consignments. Other consignors were: John C. Allison and Dane T. Brooks, Charleston; R. T. Dubes and Son, Humboldt; Kenneth S. Knox, Champaign; J. E. Wade, Greenup; and the University of Illinois.

Thirteen Hampshire ewes averaged \$72.30, with the top ewe, consigned by John P. Krell of Springfield, bringing \$127.50. Other Hampshire consignors were: Ashley farm, Tonica; Wessel Bolson, Lovington; Mary Alice Krell, Springfield; and the University of Illinois.

Seven Southdown ewes averaged \$62.85. The top ewe, which sold for \$100, was consigned by Robert F. Cresap of Seymour. Other Southdown consignors were: Helms Brothers, Belleville; and the University of Illinois.

Alvin S. Helms and Son of Belleville, consigned two outstanding Cheviot show ewes which brought \$175 and \$125, respectively.

The highlight of the day came during the closing minutes of the sale when Mr. Duncan had just brought his last Shropshire ewe into the ring. Bidding was slow, and suddenly Mr. Duncan asked any 4-H boy or girl to stand if they had come to buy a ewe and had

not bought one. A small, timid boy wearing a blue and yellow FFA jacket bearing the name of Mazon, Illinois, stood up. Mr. Duncan gave the ewe to the surprised boy and the sale was over.

W. G. Kammalade, professor of sheep husbandry and secretary of the Illinois Purebred Sheep Breeders association, was in charge of the sale. Hamilton James of Newton, Illinois, was the auctioneer.

INVESTIGATING THE VITAMIN C CONTENT OF TOMATOES

"The ascorbic acid, or vitamin C content of tomatoes varies in samples and in strains," says Dr. J. P. McCollum, assistant professor of vegetable crops of the horticulture department. Dr. McCollum has made a large number of investigations on the vitamin C content of the tomato and its products.

Samples of fruit from defoliated and non-defoliated plants were analyzed for ascorbic acid. The results indicated that plants with only a small amount of foliage produced fruits higher in ascorbic acid than those with heavy foliage. Further investigations showed that these results were due to the sunlight exposure of the fruits. It was later shown that fruits of similar sunlight exposure, but varying in the amount of foliage on the plants from which they were produced, gave highest results from the plants having the most foliage.

The vitamin C is concentrated in the portion of the fruit most exposed to light. Exposed fruits have a higher content than the shaded ones, and both are higher in ascorbic acid on the upper exposed side than the lower side.

The ascorbic acid content of field tomatoes is concentrated in the wall tissues, but in greenhouse tomatoes, it is

higher in the gelatinous materials around the seeds. Tests prove that ascorbic acid is higher in sun discolored (sun scalded) than in normally colored fruits. Investigations also show that cracked fruits were higher in vitamin C than uncracked fruits. Fruits exposed to light are more apt to crack.

The average ascorbic acid content of tomatoes grown on soil in this area is 25 to 30 mgs. per 100 gms. of tomatoes. The effect of sunlight takes place before ripening. It is not necessary to have the fruit ripen on the vine to get high ascorbic acid content. The tomato is one of the few fruits that does not lose ascorbic acid at ordinary room temperatures.

Field tomatoes contain about twice as much vitamin C as greenhouse tomatoes due to sunlight exposure. During dry seasons with a lot of sunshine, there is a higher ascorbic acid content, than in rainy and cloudy seasons.

Experiments are being carried on with tomatoes that contain as high as 75 mgs. ascorbic acid per 100 gms. These are produced by crossing the cultivated strains with the wild strains and may, at some later date, be used for commercial use.

Principles of . . .

CONSUMER'S CO-OPERATIVES

1. Open membership
2. Democratic—one member, one vote
3. Limited interest on capital
4. Patronage refunds based on purchases
5. Sales for cash at prevailing prices
6. Neutrality in race, religion and politics

**Consumer's Co-Operative
of Champaign-Urbana,
Inc.**

513 S. Goodwin, Urbana



GEE! RUST CRAFT
**COMIC
VALENTINES**

ARE "SMOOTH AND KEEN"

COME IN AND SEE THEM

STRAUCH'S
AT CAMPUS

709 So. Wright

Make Your Headquarters

at

**U. OF I. DRUG
STORE**

**Campus Bus
Terminal**



Corner Wright and Green
Phone 2747

FUNK'S "G" HYBRID

*Consistently Good
Year After Year*



**Highest Official Yield—8 Out of 11 Years
in the Illinois Ten Acre Corn
Growing Contest**

**CONDUCTED BY THE UNIVERSITY OF
ILLINOIS AND THE ILLINOIS CROP
IMPROVEMENT ASSOCIATION**



Produced Exclusively By

FUNK BROS. SEED CO.

**BLOOMINGTON, ILLINOIS
AND
ASSOCIATE PRODUCERS**

ISABEL BEVIER HOME ECONOMICS CLUB



First row: Imogene Fulton, Joan Clark, Lila Jeanne Athey, Eleanor Icenogle, Jean Dierkes, Elizabeth Streid, Esther Siemen, Doris Klinefelter, Sue Halcott, Delores Diehl, Miss Whitesel. Second row: Ruth Rutledge, Beverly Gibbs, Lois Finley, Dorothy Snow, Mary Hansen, Julann Bryce, Ruth Monroe, Willa Whitton, Shirley Johnson, Joyce Haneven, Marilyn Ewing, Ruth St. John, Virginia Stewart. Third row: Maria Fe. Atienza, Glenellen Musgrave, Rozanna Ueberrhein, Dolores White, Marjorie Harms, Doris Neumann, Miriam Wrigley, Maizee Angier, Naomi Fork, Libby Hafner, Virginia Mero, Dorothy Manby, Mary Argenbright. Fourth row: Betty Mickey, Phyllis Pretzman, Jean Neese, Mary Coapstick, Mary Ann Allen, Koreen Krapf, Pat Scherer, Muriel Smith, Joyce Rose, Mary Firszt, Mary Lou Newburn, Elaine Chum, Ruth Edson, Maxine Evans. Fifth row: Nesta Mann, Betty Johnson, Jane Bland, Ruth Johnson, Alice Jacobson, Janice Youmans, Ruby Olson, Betty Queen, Jackie Galligan, Sonya Karlan, Evelyn Zobel, Norman Swanson, Marjorie Stewart. Sixth row: Betty Braden, Mela Baughman, Betty Forsythe, Meta Keller, Margaret Rogers, Jenice Leepien, Mary Anderson, Lois Mae Gee, Mary Beedle, Connie Walker, Harriet Nifong, Roberta Webb, Betty Reynolds, Esther Schiuhmann, Virginia Kellian. Seventh row: Vivian Changnon, Margy Woodburn, Dorothy Crabtree, Blanche Long, Hattie Mae Wardell, Lucy Parish, Barbara Basse, Helena Lawson, Patricia Wallace, Roberta Green, Kathryn Whitenach, Helen Wolcott. Eighth row: Elaine Wychoff, Barbara Hackett, Kathryn Causey, Mary Binkley, Esther Morford, Dolores Wilson, Barbara Cunningham, Virginia Swain, Mary Funkhouser, Alberta Reitz, Ramona Whitson.

THE CO-OP

U. of I. Supply Store

Corner Wright and Green



Fiction

Text Books

Student Supplies
For All Courses



Phone 6-1369

A GIFT
FOR
YOUR
VALENTINE
IS
LOVELIEST
IF IT
COMES
FROM

ROBESON'S

Anderson's

JEWELRY

607 E. Green Street
On the Campus



Authorized Dealers

Hamilton, Elgin, Bulova
Watches

Keepsake Diamonds

The Finest Watch and Jewelry
Repairing in the Twin Cities

On the Campus Since 1931

Her Sons Carry On . . .

Type:

Classified "Excellent"



Transmitting Ability:

Her only daughter and two granddaughters all produced from 675 lbs. to 710 lbs. as junior 2-year-olds.



Longevity:

At 14 years she has produced 625 lbs. of butterfat in 300 days and due in June again.



De Kol Lady Rag Apple No. 1730591. She has produced 114,737 pounds of milk with 4,093 pounds of butterfat in five lactations.

SONS IN SERVICE

1. **Mooseheart Admiral Dekel.** His ten nearest tested dams average: (353 days)—Butterfat—831.34 lbs.; milk—21,954.20 lbs. His oldest daughter was First Prize Junior Yearling at the State Black and White Show, Second Prize at the Illinois State Fair, 1946.
2. **Mooseheart Golden Cross.** His eleven nearest tested dams average: (365 days)—Butterfat—855.9 lbs.; milk—22,949.6 lbs. Remember he is a grandson of the one and only Dunloggin Woodmaster, whose daughters made up to 1,168 lbs. butterfat in a year.
3. **Mooseheart Prince.** His three nearest tested dams average: (365 days)—Butterfat—950.0 lbs.; milk—24,175.0 lbs., and the two nearest dams are classified "Excellent."

Visitors Always Welcome

Mooseheart THE CITY OF CHILDHOOD Farms

H. W. McCOY, Director of Agriculture — MERLE E. HOWARD, Dairy Superintendent

AGRICULTURE CLUB

Top row: Bob Craft, John Phillips, Floyd Walker, Donald Henegar, Wayne Ozier, Reyburn Draft, Laverne Jenne, Jesse Dowell, Hubert Wetzel, Russell Lewey. Fifth row: Herbert Woolsey, Paul Ferree, Keith Schertz, James McCurdy, Frank Mealiff, Walter Fehrenbacher, William Hartel, Karl Gairdner, Stanley Musgrave, William Irwin, Gail Harms. Fourth row: William Bone, Ronald George, Robert Corzine, Leroy Schilt, George Drake, Richard Lowe, Ralph Painter, Frank Rolf, Orland McAllister, William Vanerhoff, Delmar Ohren. Third row: Ralph Johnson, Paul Finkenbinder, Harold Guither, Edwin Wright, Lee Farlow, Lowell Gardner, James Litchfield, Donald Davidson, John Irwin, Herbert Green, Donald Smith. Second row: David Cash, Ed Loecheit, Earl Urish, William Jenkins, Edward Hawkes, Charles Davison, Royce Hinton, Ralph Hunter, Paul Kimmelshue. Bottom row: Andrew White, Irwin Smiley, Donald Duvick, Edwin Sauer, Merle Le Sage, Eldon Larson, Pascall Allen, Arthur Howard, Arnold Taft.

PERFECTION DOMINO
POLLED HEREFORD CATTLE

Herd Sires:

PERFECTION DOMINO BATTLE DOMINO 56th



**CHOICE HERD BULL PROSPECTS
 CHOICE YEARLING HEIFERS**

For Sale at Farm



ERNEST PAINTER & SON

LA HARPE, ILLINOIS

FOR BETTER DUROCS

ATTEND OUR DUROC BRED SOW SALE MONDAY, FEBRUARY 10



Featuring

← **LATEST MODEL**

Our proven senior herd sire

AND

SPOTLIGHT SUPREME

Our new \$1,025 boar from the Maahs
Bros. top sale of the year
at Eagle, Nebraska

TYPICAL GILT SELLING IN SALE →

The gilts are sired by Latest Model, Happy Medium, Tru-son, Tazewell Supreme, Tazewell Fancy, Quality Boy and out of dams by Goldenrod, Step-ahead, Kant-Be-Beat, Crown Prince, Highland King, Proud Cherry, Glamour King and Latest Model. They are a great lot of medium type sound gilts and bred to two of the thickest sound boars of the breed in service today.



Write For Sale Catalog

John N. Urish & Sons

GREEN VALLEY, ILLINOIS

1¼ Miles SW

Sale held regardless of weather in heated sale barn

SWINE NUTRITION . . .

(Continued from Page 1)

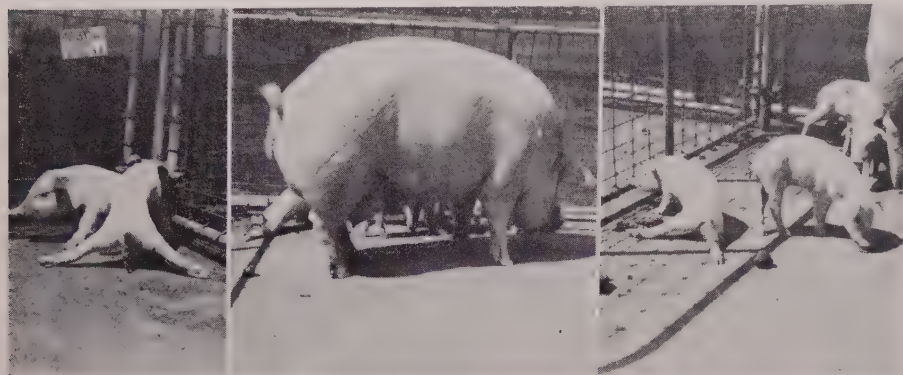
than those of the basal group. The pigs fed alfalfa meal were heavier at weaning time than those fed the folic acid concentrate.

Many nutritional needs of brood sows are unknown. This, of course, is especially true with the B-2 vitamins. Brood sows, it is found, require more vitamin A and as much calcium and phosphorous as weanling pigs. Pasture may offer some simplification in this respect, but the nutritive requirements are not altered. As a practical safety measure in brood sow nutrition, it is recommended that natural vitamin carriers such as

alfalfa meal should be fed to supplement drylot rations.

Several other problems in research are being conducted at the swine experimental farm. Among these are tests on many new by-product feeds such as distiller's solubles, fish solubles, and fermentation solubles. Most baffling is the problem of what is in alfalfa meal that makes it such a valuable supplement to drylot rations. Experimentation is in progress to further emphasize the importance of pastures in swine feeding.

Good range for poultry will reduce disease and parasite troubles, will also reduce feed costs and, in most instances, will grow stronger, healthier pullets.



Deficiency symptoms produced by feeding the basal ration. These pigs were 43 days old when the photo was taken. Only three pigs averaging ten pounds each were weaned at 56 days.

NEW SLANTS . . .

(Continued from Page 13)

tions for freezing fruits and vegetables are partly based on the information gained from these experiments.

The most recent slant on frozen foods is the success that has been obtained in freezing precooked foods and baked products. Angel food cake, sponge cake, gold cake, and apple pie are among the various baked products which have been stored successfully in the frozen state. Combination dishes such as stews, chicken a' la king, baked beans, and spaghetti and meat balls are also undergoing experimentation. Such frozen products are now considered practical for short periods of storage. Due to the large amount of locker storage necessary, lengthy storage is not advised.

AGRICULTURAL JOBS . . .

(Continued from Page 18)

100 officers in 51 countries have been reporting on: agricultural production of foreign countries, demand for agricultural products in foreign countries, and agricultural policies of foreign countries. College campuses furnish the bulk of these men, who must pass a stiff foreign service examination to become eligible.

For an agriculture student who has a liking for travel and a comprehensive knowledge of at least one foreign language, this may be a likely job.

Select Your Seed Stock From

Illinois Leading Holstein Herd

On 2-Time-a-Day Milking

Sixteen Year Ave. D.H.I.A. on 2x 461 lbs. Fat—3.75% Test

Five Year Ave. H.I.R. on 2x 494 lbs. Fat—3.8% Test

Special—Young Bull Calves from Foundation Dams sold at reasonable prices. Club Heifer Calves born after January, 1947, offered to outstanding 4-H Club members.

Our Heifers Win at Fairs and are from Proven Sires

HOWARD FARM

Robert B. Howard, Dundee, Illinois



Silence IS NOT ALWAYS GOLDEN



The farmer has been, by tradition, a quiet sort of fellow. And because in the past he has said little, in an organized way, people of the cities have known too little about his problems . . . his high labor costs, his risks, his heavy investment, his long hours. And people ignorant of his problems have sometimes been unsympathetic to his needs.

Today, through his Farm Bureau, the farmer has acquired a voice — a voice that is heard not only in Washington and Springfield among the policy-makers, but heard and respected along the quiet streets of Middletown, by the butcher, the baker and the candlestick maker. Today in an organized, professional way, the farmer is making his position understood among the Americans he serves so well.

Illinois
**AGRICULTURAL
ASSOCIATION**
AND 99 COUNTY FARM BUREAUS

RAREST COVERLET . . .

(Continued from Page 7)

white which shows two rows of locomotives and tenders on a track. As in all designs of this type, the tenders carry the number "240." The other coverlet has the same design as the one described above except that it is entirely covered with floral decorations.

Plans Being Made to Display Collection

Other extremely rare coverlets in the collection are one made in Maryland, one made in Virginia, and two which include figures of horses. Another coverlet shows lions and the tree of plenty in the corner of the border. Under each tree is the word "zoar," an early relig-

ious sect probably of English origin. The lion emblem is rare because it was the emblem of the English. American colonists eventually adopted the spread eagle emblem.

Plans are under way for the building of special cabinets so that the collection may be placed on display. Until this is completed the collection cannot be seen by the public. The new cabinets are designed especially for the proposed new home economics building. Until this building becomes a reality the cabinets will probably be placed on second floor, Bevier Hall.

★ BUY VICTORY BONDS ★

Lesson for Tomorrow



Tomorrow's leaders of the agricultural industry—the students of today—can profit by the wartime lesson in cooperation learned by the meat industry. Remember—your success as individuals is dependent on the success of the entire industry. Tuck away this thought for the future—your future. Resolve that you will bring into the business—together with the specialized knowledge you are acquiring—the ability to cooperate. Help to continue the spirit which made possible the industry's great record of production during the war. Together—we can *all* succeed.

ARMOUR and Company

ILLINOIS SHEEP . . .

(Continued from Page 6)

pound which retards the functions of the thyroid gland. It was believed that if the secretions of the thyroid gland could be reduced the lambs could be fattened faster and with less feed.

Three lots of 10 lambs each were placed on test. One lot received a regular fattening ration of corn, corn silage, and soybean oil meal. The second lot received a small amount of thiouracil in their feed and the third lot received twice as much of this drug in their ration.

The results of these feeding tests showed that thiouracil did not cause faster gains. Rations which contained it were less palatable and the lambs did not eat their feed so readily. Gains were greatest in the first lot of lambs that was fed a ration containing no thiouracil. However, it is possible that gains were more economical in the lots of lambs which were fed the thiouracil.

PROPER STORAGE . . .

(Continued from Page 16)

boards, if sound, can be worked into suitable shelving. Canned goods is a heavy, valuable load. Its housing should therefore be made of sturdy material, well nailed and made rigid.

Complete information on measurements, shelf capacity and construction is available in the Department of Agricultural Engineering leaflet AEng 392. It will be mailed upon request by the Extension Service, University of Illinois College of Agriculture, Urbana, Illinois.

DDT has controlled 80 to 90 per cent of European corn borers. Both 3 and 5 per cent solutions in spray or dust form are effective. Use when egg masses appear under leaves.

MORE MILK AT LESS COST

Holsteins hold all world records for milk production. Having greater feed capacity, they can consume large amounts of home-grown roughage, assuring their owners greater profits. Also, they continue to produce consistently at 12 and 15 years of age or longer.

HOLSTEIN-FRIESIAN ASS'N

OF AMERICA • Brattleboro, Vermont • Box 1068

**NOTICE**

We have a few **VACANT** spots for *Fraternity and Sorority*

"FLAT WORK JOBS." If you are stuck just call

WHITE LINE LAUNDRY



PHONE
4206

IH and the IH dealer will do their level best for farmers in 1947!

ONLY one thing is *new* in that headline. International Harvester and the IH dealers have been doing their *level best* for generations in the interest of American agriculture.

So what's new in it? Well—there's that figure 1947. A brand-new season is coming up, and we believe that things are going to be a lot different.

In recent years, "level best" hasn't been good enough. . . . In every community in the land the farmers have been repairing and mending old equipment, and getting by—waiting in line at every dealer's door with patience and tempers wearing mighty thin. . . . Right this minute a thousand farmers are asking "When's *my* tractor coming, and those new machines that were promised me months ago?" It has been hard to take—for farmer and dealer and manufacturer alike.

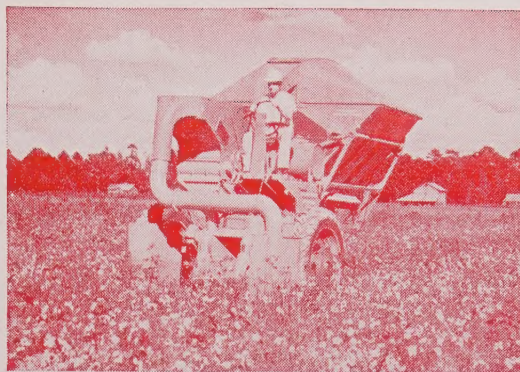
Every farm operator knows that the Harvester Company has perfected many new products, competently engineered and tested, fully qualified to take to the fields. . . . Our problem now is to turn them out in quantity production for our millions of customers, from long established plants and from many new factories. Our hope for this new year is to keep assembly lines running without interruption until every man's need is satisfied.

The farmer who wants *competent winter service work* and the *latest news* about new equipment will be sure to see his International Harvester Dealer.

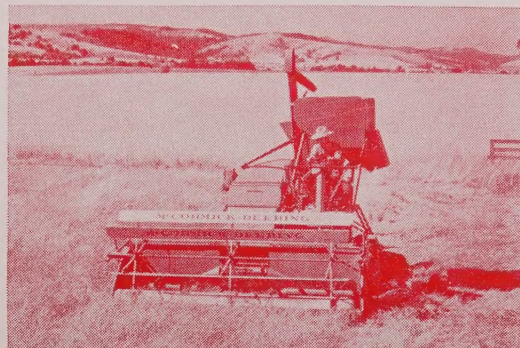


INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue Chicago 1, Illinois

Remember that "FARMALL" is a registered trademark—Farmalls are made only by International Harvester.



Above: International Mechanical Cotton Picker. New plant under construction at Memphis, Tenn., will build this machine in limited numbers this year.



Above: McCormick-Deering 123-SP Self-Propelled Combine. Other coming International developments: smaller combines, tractor touch-control, refrigeration.



Above: McCormick-Deering One-Man Pickup Twine Baler. Many other new hay machines are in various stages of development by International Harvester engineers.

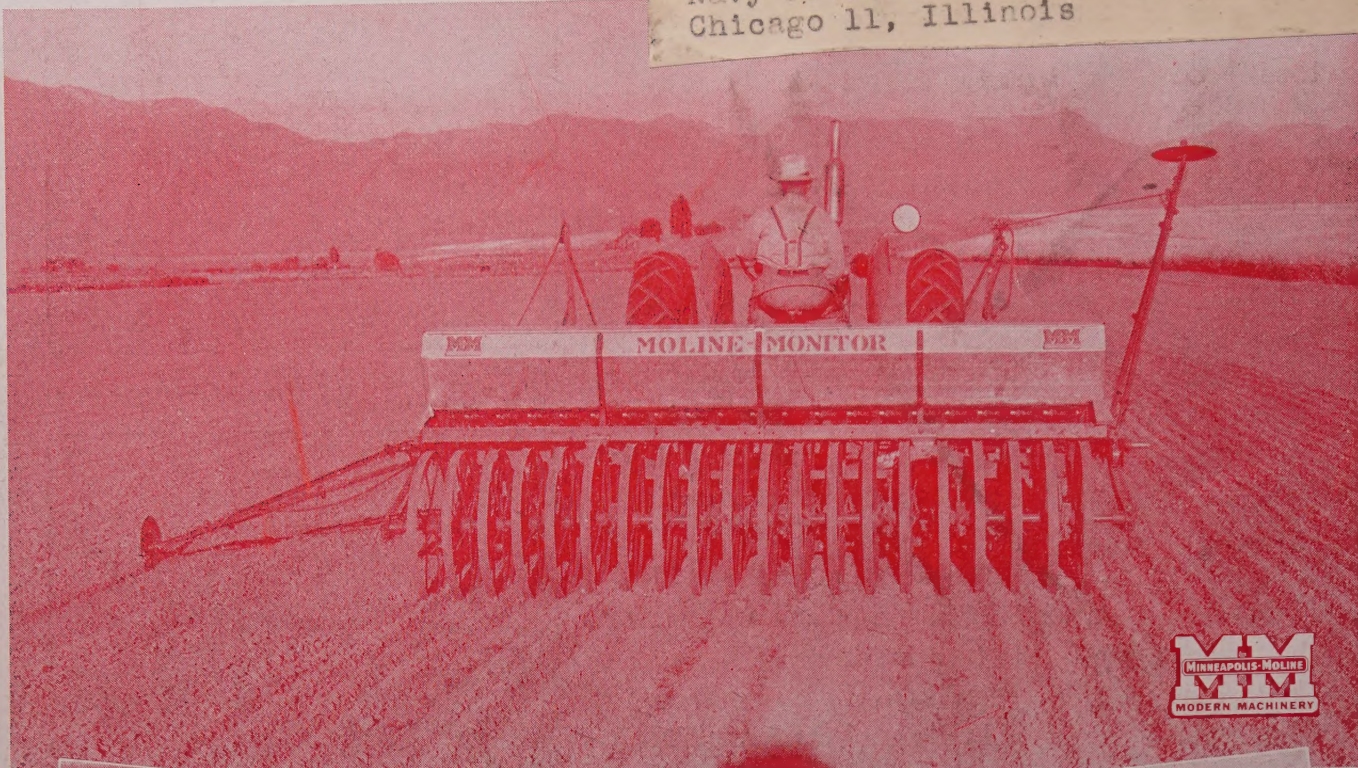


Above: The New International No. 24 2-Row Tractor-Mounted Corn Picker. Coming International machines include new 1-row corn pickers and cut-off corn pickers.

INTERNATIONAL HARVESTER

Power Farming Equipment

Library
University of Illinois
Undergraduate Division
Navy Pier Grand Avenue
Chicago 11, Illinois



PRIDE OF POSSESSION

MM MODERN MACHINES and Modern Methods are designed to increase the efficiency of the farm factory for greater present production and to insure the continued and improved fertility of the soil.

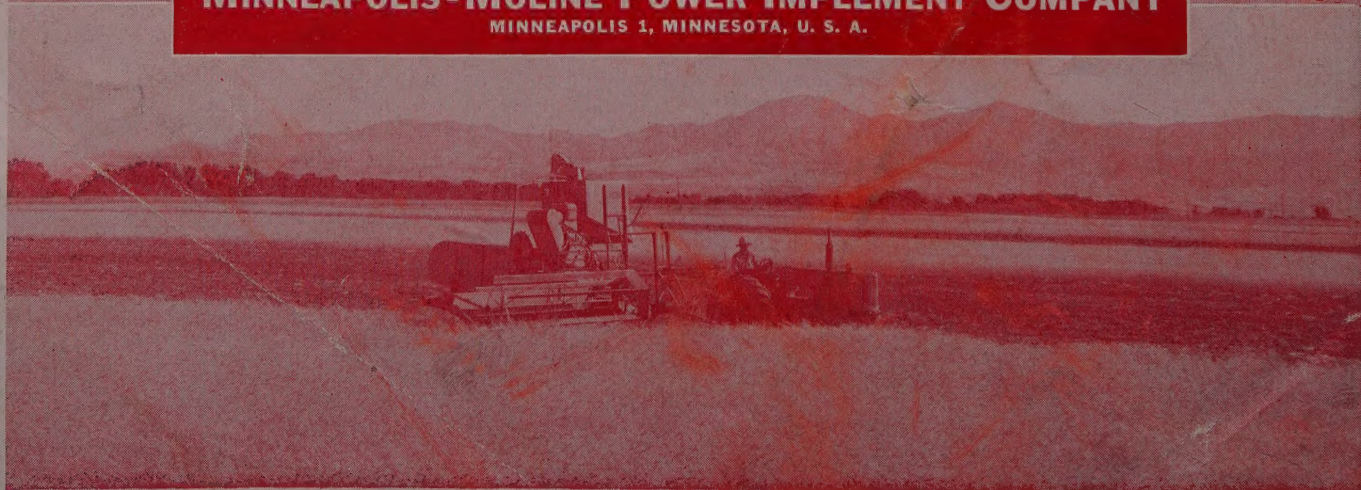
MM MODERN MACHINES have the precision, the power and the long life to meet above normal demands. High standards of design and manufacture assure greater dependability, safety, economy, accessibility . . . machines designed for greater production with less drudgery.

Progressive farmers look to MM Dealers for assistance in recommending modern machine tools for their farm factories. They know that ownership of MM MODERN MACHINES, Tractors and Power Units for farm use is a sound business investment that will pay good returns for many years to come. MM equipment is worth waiting for!



MINNEAPOLIS-MOLINE POWER IMPLEMENT COMPANY

MINNEAPOLIS 1, MINNESOTA, U. S. A.



Illinois U Library

JAN 29 1947